A.I.D.'s Child Survival Program: A Synthesis of Findings

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A.I.D.'s Child Survival Program: A Synthesis of Findings From Six Country Case Studies

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## Summary

In 1985 the Agency for International Development (A.I.D.) launched its child survival initiative to improve the health of children in developing countries. Working with national governments and other international donors, A.I.D.'s objective was to reduce infant mortality rates in A.I.D.-assisted countries from the 1985 average of 97 deaths per 1,000 live births to 75 deaths by the year 2000.

For this assessment of A.I.D.'s Child Survival Program, the Center for Development Information and Evaluation (CDIE) evaluated A.I.D.-supported child survival programs in six countries Bolivia, Egypt, Haiti, Indonesia, Malawi, and Morocco. A series of CDIE Technical Reports summarized the findings of the six country case studies. This report synthesizes the results of the studies, drawing broader conclusions about the performance of different aspects of A.I.D.'s Child Survival Program and offering program recommendations.

This assessment includes six sections. Sections 1 and 2 describe the study and the background to the program. Section 3 provides an overall summary of program performance, examining the program's effectiveness, impact, sustainability, and efficiency. Section 4 presents a more detailed review of the different health interventions for mothers and children that A.I.D. has supported under its Child Survival Program, including vaccinations, oral rehydration therapy, nutrition, family planning to reduce the number of high-risk births, treatment for acute respiratory infections, safe motherhood and breast-feeding, and water and sanitation. Section 5 deals with A.I.D.'s management of the program, examining implementation problems, private sector participation, policy dialogue, the effect of exogenous factors, and donor coordination. Section 6 concludes the report, offering overall program recommendations and identifying a number of unresolved issues.

## Overall Program Performance

The CDIE assessment defined effectiveness, the first of the four dimensions of program performance as the coverage of A.I.D.-supported Child Survival services. Evidence from the six country studies showed that A.I.D.'s contribution to expanding the coverage of vaccination services, in collaboration with other donors, has been effective. But implementation problems have made oral rehydration therapy (ORT) less effective, although gains are being made in some countries. The coverage of other child survival interventions supported by A.I.D. varies by country and by intervention. A.I.D.'s institution-building activities appear to be the untold success story of the Child Survival Program. In three of the six countries examined Bolivia, Indonesia, and Morocco A.I.D. has been instrumental in developing innovative institutional arrangements that have increased the coverage of low-cost services.

The second dimension of performance impact refers to the longer term development consequences of the Child Survival Program, measured by infant and child mortality and morbidity rates. In A.I.D.-assisted countries, average infant mortality rates declined by 10 percent between 1985 and 1991, from 97 infant deaths per 1,000 live births to 87 per 1,000 live births. In some countries with strong programs, declines were as high as 25 to 50 percent. The assessment was unable to determine the portion of mortality reduction directly attributable to health services for mothers and children (as opposed to other economic, demographic, and social factors that influence mortality) or specifically to A.I.D.'s Child Survival Program. Based on convincing circumstantial evidence, the assessment concluded that A.I.D. can take credit for a meaningful share of the progress made in countries where the Agency has made a substantial contribution. Sustainability, the third dimension of program performance, refers to the ability of a local program to continue to operate effectively after A.I.D. support ends. Generous donor support for child survival has created dependence on donors in many countries. In fact, the evaluation found growing concern among A.I.D. health officers and their host country counterparts regarding the sustainability of A.I.D-supported services and institutions. In particular, sustainability is a problem with mature programs, such as those in Egypt and Morocco, where A.I.D. is experiencing difficulty phasing out support. However, as the Bolivia program demonstrates, financial sustainability is possible even with very poor clients living in very poor countries if it is a major program objective.

The evaluation's review of program efficiency, the fourth dimension of performance, confirmed the well-documented cost-effectiveness of preventive primary health care compared with more traditional curative services. Although major benefit-cost analyses were not performed, summary calculations in two countries reaffirmed that child survival is a sound development investment, returning more to the economy of participating countries than it costs.

## A.I.D.'s Health Interventions

A.I.D. began child survival efforts later than other donors supporting it. Consequently, it has often played a supporting role in immunization activities, letting other donors take the lead. However, A.I.D. has tried to take the lead in supporting ORT, but with disappointing results. Many A.I.D. country programs appear to have underestimated the requirements for support services promotion, training, logistical needed for ORT to work correctly. The success of A.I.D.'s ORT program in Egypt shows that the technology can be very effective on a massive scale if it is adequately implemented. Armed with new knowledge about how to make ORT work, A.I.D. should reinvigorate its efforts in this area.

Promoting family planning to reduce high- risk births was found to significantly reduce infant mortality, and A.I.D. has special responsibility and comparative advantage among donors because of its long experience and traditional leadership in the population sector. Breast-feeding and vitamin A supplementation appear to be cost-effective interventions. However, evidence of large-scale results from A.I.D.'s interventions in nutrition, water and sanitation, and acute respiratory infections was elusive in the six country case studies.

## A.I.D.'s Management of the Child Survival Program

The A.I.D. Child Survival Program is currently staffed by an eclectic cast of A.I.D. officers, contractors, university fellows, and professionals detailed from other U.S. government agencies. Staffing needs to be rationalized according to program requirements to optimize results and reduce vulnerabilities. The assessment found that A.I.D.'s complicated administrative requirements and procedures resulted in long delays, wasted resources, and strained relationships. The idea of emphasis countries seems to have worked in terms of concentrating resources and getting strong results,although not all 22 countries received the same degree of emphasis. Central contracts have been useful in "jump starting" field activities, although activities under central contracts are sometimes difficult to manage and integrate into country strategies. The pressure on Missions created by the congressional mandate to expedite activities and get quick results has apparently not resulted in undue haste or careless use of resources in the field.

The evaluation found that A.I.D. has successfully involved the commercial private sector, nonprofit health providers, and private voluntary organizations (PVOs) in providing child survival services. The country programs have benefited from the greater involvement of the private sector promoted by A.I.D. In the area of policy dialogue, A.I.D. has experienced some success in promoting changes in operational policies in the health sector. Acceptance of reproductive risk approaches, administrative decentralization, and private sector involvement are examples of A.I.D.'s policy dialogue successes. The Agency

has had less success persuading host country governments to make major budget reallocations to provide more funding for primary health care.

The evaluation concluded that although exogenous factors, such as political stability and economic growth, have some influence on program performance, they do not "make or break" child survival services. Child survival services are popular everywhere, and A.I.D. has been able to get satisfactory results regardless of the political, economic, and social environment.

Moreover, donor coordination has been better in child survival than in many other social sectors. Different donors have different strengths and weaknesses, and they have found ways to complement each other and work efficiently together in most countries.

Overall Management Implications

The bottom line of the assessment is that A.I.D.'s Child Survival Program is successful and should be continued. The assessment provides two sets of recommendations: specific recommendations for improving activities and procedures, which are made throughout the assessment report, and general recommendations, which are as follows:

Update the A.I.D. child survival strategy based on accumulated experience; clarify objectives, phase-out criteria, emphasis country selection, country strategy development, staffing patterns, and overall program emphases.

Select health interventions at the country level according to the potential of the intervention for further reducing infant mortality at low cost.

Provide assistance in three priority areas in country programs health services for mothers and children, institutional strengthening, and financial sustainability. Determine the priority of each area according to the country's health conditions and the level of development of its health sector and other donor activities.

Increase A.I.D.'s programwide emphasis on institutional strengthening and financial sustainability.
Make A.I.D.'s accomplishments in child survival known to the public and the political leadership in cooperating countries and in the United States.

Balance quick results with long-range developmental objectives.

Unresolved Issues

Cross-sectoral linkages. How can the A.I.D. program more effectively strengthen the strong interaction among the health, education, and population sectors?

Research. What kinds of developmental and applied research are appropriate for A.I.D. support?

Glossary

A.I.D. U.S. Agency for International Development
CDIE Center for Development Information and Evaluation
DHS Demographic and Health Survey
EPI Expanded Program of Immunization
ESF Economic Support Fund
FY Fiscal Year
IEC information, education, and communication
NGO nongovernmental organization
ORS oral rehydration salt
ORT oral rehydration therapy
PL Public Law
PVO private voluntary organization
UNICEF United Nations International Children's Education Fund
VDMS Visite a Domiciles de Motivation Systematique
WASH Water and Sanitation for Health (A.I.D. centraly funded project)

1. Introduction

This report summarizes the results and conclusions of a Center for Development Information and Evaluation (CDIE) assessment of the U.S. Agency for International Development (A.I.D.) Child Survival Program. The evaluation is based on field studies of A.I.D. Child Survival Programs in six countries: Bolivia, Egypt, Haiti, Indonesia, Malawi, and Morocco. It concentrates on questions raised in interviews with Agency senior management concerning the performance, management, and strategic focus of the Child Survival Program. The report's findings and recommendations are intended to provide A.I.D. policymakers with information needed to help them make decisions concerning the future of the program.

The six countries evaluated were not sampled randomly and were not, in a statistical sense, a representative sample. However, the synthesis report treats the group of six studies as if they were generally representative of the overall A.I.D. Child Survival Program. Drawing generalizations from the country case studies about the larger Agency program seems reasonable for three reasons. First, the six countries were deliberately selected to represent the fullest possible range of A.I.D. experience, including different regions of the world, different program approaches, different program sizes, and different country conditions. Second, the group of six countries is a sizable sample, representing 27 percent of the 22 A.I.D. child survival emphasis countries. Third, the assessment's findings and recommendations have been checked by knowledgeable internal and external reviewers who helped eliminate information that was anomalous and not relevant to overall Agency experience.

For this assessment, "child survival" is defined as A.I.D.-supported activities to reduce infant and child mortality

rates, as specified in congressional mandates and as elaborated in Agency policy documents. The assessment is not confined exclusively to the A.I.D. Child Survival Account, but includes some child survival activities funded under the Health Account, the Population Account, and Public Law (PL) 480. For the most part, CDIE evaluated only activities begun after A.I.D. formally launched its Child Survival Program in 1985, even though the Agency had supported primary health care activities in many countries before the formal child survival initiative. The case studies mainly examined bilateral assistance programs; centrally funded A.I.D. child survival projects were not evaluated.

Measurement and methodological issues are discussed at various points throughout this report. But the report does not provide a complete worldwide summary of A.I.D. results in the aggregate. More detailed statistical results are available in the annual reports to Congress prepared by the A.I.D. Child Survival Program.

For each country case study CDIE tried to gather both qualitative and quantitative information. Readers interested in reviewing the evidence and data substantiating the findings and recommendations in this report are referred to the six CDIE Technical Reports (listed in the bibliography) that document the results of each of the country case studies.

This synthesis report covers the following three topics: (1) overall program performance in terms of effectiveness, impact, sustainability, and efficiency; (2) findings and recommendations concerning the particular health interventions for mothers and children A.I.D. has supported under its Child Survival Program; and (3) findings and recommendations concerning A.I.D's management of the program. The concluding section contains overall program recommendations based on the evaluation findings and identifies some unresolved issues.

## 2. A.I.D.'s Child Survival Program: Background

### Objectives

In 1985 A.I.D. launched its Child Survival Program to improve the health of children in developing countries. Working with national governments and other international donors, A.I.D.'s objective was to reduce infant mortality rates in A.I.D.-assisted countries from the 1985 average of 97 deaths per 1,000 live births to 75 deaths by the year 2000.

Specific objectives of the Agency were to work with other donors and cooperating countries to increase vaccination coverage of BCG (tuberculosis vaccine), measles, DPT3 (three doses of vaccine against diphtheria, pertussis, and tetanus), polio3, and tetanus2 to 80 percent; to promote the use of oral rehydration therapy (ORT) in 45 percent of all diarrhea cases; to improve nutrition with an emphasis on breast-feeding and proper infant and child feeding; and to promote child spacing to reduce the number of high-risk births.

## Congressional Guidance

The U.S. Congress has shown consistent support for child survival efforts and, since 1985, has earmarked A.I.D. funding for the program. Congressional guidance has been clear and specific. For example, the 1989 Senate Foreign Assistance Appropriation Bill contains the following language:

In establishing this program the Congress encouraged the Agency to utilize the simple, available technologies which can significantly reduce childhood mortality, such as improved and expanded immunization programs and the promotion of oral rehydration. In addition to oral rehydration therapy and immunization, the Agency for International Development is convinced, and the Committee agrees, that two other activities are an essential part of a successful Child Survival Program. These are birth spacing and a special nutrition program focused on breast-feeding, weaning, and growth monitoring.{Footnote 1}

## A.I.D.'s Approach

A.I.D.'s strategy in the worldwide Child Survival Program has been to focus on a limited number of low-cost health interventions for mothers and children proven to have a direct impact on infant and child mortality. The four core interventions identified at the beginning of the program were (1) immunizations against childhood diseases, (2) ORT to reduce deaths from diarrhea, (3) improved nutrition, and (4) child spacing to reduce high-risk births. A.I.D. selected 22 emphasis countries, that together comprised two-thirds of infant mortality worldwide. The Agency has supported additional child survival activities in at least 40 other countries. Since 1985, A.I.D. has committed more than $1.5 billion to the Child Survival Program. Figure 1 shows the allocation of A.I.D. resources among interventions and regions.

A.I.D.'s approach to child survival has had certain characteristics that distinguish the Child Survival Program from other A.I.D. social-sector development programs. First, the mandate for quick, measurable impact meant that more initial emphasis had to be given to subsidizing the direct delivery of health services to clients, leaving fewer resources for long-term institutional strengthening than is sometimes the case in A.I.D. development programs. Second, A.I.D. made a strategic choice to concentrate on a limited number of countries where the need was greatest and where conditions were most favorable for achieving rapid impact. Third, because child survival is an international movement that has attracted many major donors, the program has involved more interdonor cooperation than is usual. Fourth, congressional interest and the program's high political profile put intense pressure on A.I.D. to disburse funds and implement activities rapidly, potentially increasing the risk of programmatic or administrative missteps. Fifth, A.I.D. has made an effort to involve the private sector as much as possible in child survival activities.{Footnote 2}

A.I.D.'s country-specific child survival programs differ considerably. The diversity of circumstances and approaches that characterizes A.I.D.'s Child Survival Program is illustrated in the next section, which summarizes the six country programs evaluated for this assessment.

## The Country Case Studies

CDIE conducted field evaluations of A.I.D. child survival programs in six countries between 1989 and 1992: Bolivia (1992), Egypt (1989), Haiti (1991), Indonesia (1989), Malawi (1992), and Morocco (1990).

Bolivia. The Program in Bolivia is relatively new, but it represents a large, high-priority component of A.I.D.'s overall development assistance program in that country. In fiscal year (FY) 1992, child survival, health, and population projects constituted 60 percent of A.I.D.'s budget for development assistance in Bolivia. A.I.D. provides one-third of the total support for the country's national immunization program. Coverage of basic immunizations has grown from less than 10 percent in 1986 to around 55 percent in 1992, and the incidence of preventable childhood diseases diphtheria, measles, polio, and pertussis has declined rapidly to very low levels. On the other hand, A.I.D.'s support for the country's effort to control diarrheal diseases has not yet been effective because of logistical problems and lack of strong information, education, and communication (IEC) support.

The principal emphases of A.I.D.'s Child Survival Program in Bolivia are strengthening institutions and developing financially sustainable services. The work on financial sustainability in particular is a major breakthrough for Bolivia and for child survival worldwide. An A.I.D.-created nongovernmental organization (NGO), PROSALUD, has succeeded in becoming sustainable by charging fees for its services to low-income families. In addition to this milestone in cost-recovery, A.I.D. is breaking new ground by establishing a child survival endowment to provide permanent income for health services run by private voluntary organizations (PVOs).

Egypt. The Program in Egypt is large and mature, moving toward a phase-out of A.I.D. support. In the early 1980s, before formal initiation of A.I.D.'s worldwide child survival initiative, A.I.D. joined other donors in supporting child survival activities in Egypt. The two initial core activities, ORT and immunizations, have been successful. Three subsequent activities, acute respiratory infections, child nutrition, and child spacing, are smaller and have had less impact. An especially important finding in CDIE's case study of Egypt is that infant deaths from diarrheal diseases nationwide have declined dramatically since the start of A.I.D. assistance and are being successfully controlled with ORT. Local production facilities for oral rehydration salt (ORS) have been established and are producing 30 million packets annually to meet national demand, 40,000 health

workers have been trained in ORT, and major national television campaigns have reached the entire population with information. Ninety-eight percent of mothers know about ORT and two-thirds of mothers use it. The national vaccination program has been successful as well, having reached more than 80 percent of Egyptian children by 1987. A.I.D. is now hoping to phase out its support of child survival in Egypt but has run into sustainability problems. The Egyptian public health system is expensive, with large facilities and many physicians on the payroll. The size of the A.I.D. program, coupled with the large number of active donors, has created a high degree of donor dependency.

Haiti. The Program in Haiti has two unusual features, a nutrition focus and heavy reliance on PVOs. Because chronic malnutrition affects at least 60 percent of children under age 5 in Haiti, the program concentrates on nutrition-related interventions, including growth monitoring and surveillance, nutrition education and promotion of sound breast-feeding and weaning practices, food supplementation, nutritional management of diarrheal episodes, and vitamin A distribution. Chronic malnutrition has been reduced by as much as two-thirds in communities that have received all of these PVO-provided services, and PL 480 feeding programs have had national impact by reaching 20 percent of all children in the country.

The second interesting feature of the Haiti program is its heavy reliance on PVOs. Because of political instability, government programs deteriorated during the 1980s, and A.I.D. shifted much of its child survival programming to PVOs. PVOs provide health services to 30 percent of the national population and 50 percent of the rural population. Institution-building activities with the Government of Haiti that had received A.I.D. support during the early 1980s have largely stopped. As a result, A.I.D.'s Child Survival Program in Haiti is mainly humanitarian, a "safety net" that is keeping people alive in hopes that political and economic conditions will improve.

Indonesia. Indonesia's Child Survival Program emphasizes five principal interventions for mothers and children: nutrition, maternal health care, immunizations, family planning, and diarrheal disease control. Provided initially through separate vertical units, the five services were integrated in 1985 by organizing monthly community health posts, known as posyandu, throughout the country. Village volunteers are responsible for weighing children, providing nutritional counseling, and keeping most of the records. Government health workers, usually vaccinators, midwives, or nurses, visit on a monthly schedule to provide immunizations and to identify high-risk mothers.

Immunization coverage has grown rapidly, from near zero to around 60 percent during the 1980s. ORT has received less priority but has had moderate success: ORT is now being used to treat about 25 percent of diarrheal episodes. Family planning has received high government priority and the contraceptive prevalence rate has climbed to 48 percent of women of reproductive age, causing a

reduction in high-risk births. Infant and child mortality rates declined significantly during the 1980s. As vaccine-preventable diseases and diarrhea are brought under control, the program will take on additional problems that have not yet been effectively dealt with, including acute respiratory infections and a high number of deaths in the first month of life caused by poor prenatal care and birthing practices.

Malawi. Malawi is characterized by extreme poverty, although, unlike Haiti, it is politically stable and its economy is growing. A.I.D.'s principal focus is on strengthening the Malawi Ministry of Health, since other donors provide subsidies for most of the basic child survival health services. A.I.D.'s institutional strengthening activities include staff training and assistance with management information, planning, research, and communication functions; it is too soon in the program to assess the effectiveness of these institutional strengthening activities.

A.I.D. also supports some health services, through both the Ministry of Health and PVOs. The multidonor immunization program to which A.I.D. contributes is a big success, having achieved an 80 percent coverage rate. A.I.D. also supports community water systems and HIV/AIDS prevention activities that are starting to show results, and the Agency has been the lead donor in malaria prevention and control.

On the negative side, the control of diarrheal diseases program, which receives minor A.I.D. support, is plagued by administrative problems, low policy priority, and logistical constraints. The A.I.D.-financed family planning program is moving very slowly, although there are some small signs of progress. Moreover, despite fewer incidents of communicable childhood diseases in Malawi, the infant mortality rate reversed its downward trend in the mid-1980s and has been climbing ever since because of the spread of new strains of malaria. Because of extreme poverty in Malawi, making significant progress toward achieving financial sustainability of child survival services in the foreseeable future does not appear feasible.

Morocco. The Morocco Child Survival Program is another mature program, which is attempting to work toward eventual phase-out of A.I.D. assistance. A.I.D. has provided more than $50 million to Morocco for family planning and maternal and child health activities over the past 15 years. Initially, A.I.D.'s exclusive focus was on family planning. An unusual aspect of the Morocco program has been the evolution of a community-based outreach model, Visite a Domiciles de Motivation Systematique (VDMS), by which Ministry of Health paramedical staff based in villages visit clients in their homes to provide primary health care and family planning services. Initiated with A.I.D. support as a family planning delivery system, VDMS was expanded in the mid-1980s to provide both integrated primary health and family planning services. VDMS services now cover 75 percent of the rural population of Morocco. With A.I.D. support, the contraceptive prevalence rate increased from 7 percent in 1974 to

37 percent in 1987. Vaccination coverage jumped to about 80 percent, and the infant mortality rate dropped from 122 deaths per 1,000 live births in the 1970s to 82 deaths per 1,000 live births in the 1980s. Two major difficulties with the program are control of diarrheal diseases and financial sustainability. Use of ORT to control diarrheal diseases has received low priority with few results. The problem of financial sustainability has recently moved to the forefront of program concerns because A.I.D. and UNICEF both want to phase out their support for child survival activities during the 1990s. A number of ideas are being tried, including decentralizing to local governments, shifting to private providers in urban areas, and charging fees, but there is concern that coverage and impact levels of child survival and family planning services will suffer as A.I.D. support declines.

3. Overall Program Performance

This section summarizes CDIE findings on four dimensions of program performance: effectiveness, impact, sustainability, and efficiency. Subsequent sections provide more detailed findings and recommendations on the different health interventions and on A.I.D.'s management of the program.

In this assessment, effectiveness is the extent to which program services are reaching and being used by the intended beneficiaries, as indicated by the coverage of A.I.D.-supported services and their quality. Impact refers to the longer range development results of the program, including changes in infant mortality rates and the incidence of childhood diseases.

Sustainability examines the extent to which A.I.D.-supported health-service providers are becoming institutionally and financially strong enough to continue alone after A.I.D. support ends. And finally, efficiency examines whether A.I.D.'s investment in child survival represents good use of resources compared with alternative ways of using the same resources.

Effectiveness

Evaluation of program effectiveness involves some measurement problems. First, it is often difficult to determine whether countries' coverage statistics show real permanent coverage or the temporary coverage that results from unsustainable bursts of activity, such as crash vaccination campaigns. Second, national coverage statistics often obscure important equity discrepancies, such as different levels of coverage among different geographical regions within a country. Third, isolating the effectiveness of A.I.D.-supported services is difficult, because A.I.D. is just one player in multidonor country programs. Fourth, coverage statistics are notoriously incomplete and inaccurate in most A.I.D. countries, and quality-of-care information is hardly available. Fifth, changes in national health indicators are produced in part by changes in health services, but they are also influenced by other nonprogram factors, such as macroeconomic trends, rural to urban migration, and changing educational attainment levels.

With regard to institutional-strengthening activities, indicators of the coverage and quality of health services do not tell the whole story about A.I.D.'s program performance. Other indicators, such as the number of staff trained, facilities upgraded, management information systems improved, equipment provided, or programs and units enhanced are also considered in countries where institution building is an A.I.D. objective.

## Findings

Box 1 summarizes some of the evidence concerning program effectiveness found in each of the six field studies. The discussion that follows reviews overall findings on the effectiveness of the program.

### Vaccinations

The A.I.D. program has supported the expansion of coverage of immunizations in many countries, and, judging from the case studies, A.I.D. assistance has been effective. In most countries evaluated, UNICEF was the lead donor supporting vaccination services, and the amount and nature of A.I.D. support varied from country to country. Typically, A.I.D. played an important supporting role, coordinating activities and resources with other organizations, providing needed commodities, and filling gaps as problems arose. Although the evaluation could not determine A.I.D.'s exact contribution to the dramatic improvements in country or worldwide vaccination coverage rates, convincing evidence exists that it was substantial.

### Control of Diarrheal Diseases

A.I.D.'s effort to expand the coverage of ORT has not been as effective as it could have been. In four of the six countries evaluated by CDIE, ORT use had not become widespread and coverage had not approached the Agency's program objective of ORT use in 45 percent of cases of children's diarrhea. Evidence from the six case studies clearly shows that ORT can produce considerably more impact on reducing infant mortality rates than it has so far and A.I.D. can still take the lead in promoting this promising technology. A.I.D. has only to improve its ORT package. Based on its experience to date, A.I.D. should be able to determine the mix of services and resources, such as commodities, training, public information, and logistic support, needed to provide ORT services effectively, and then strengthen its activities accordingly.

### Water and Sanitation

All six of the A.I.D. country programs had some kind of water and sanitation activities. A few are supported with child survival funding, whereas others are managed by A.I.D. as infrastructure or PVO projects. Although the case studies may not fully represent A.I.D.-supported water and sanitation activities, enough evidence exists to reach three tentative conclusions.

First, water and sanitation components can effectively improve health and child survival conditions within their specific coverage areas. Second, community water and sanitation projects are successful only if there is community initiative, community education, and community control from the onset. Third, because of high costs, coverage areas of A.I.D.-supported water and sanitation components are normally too limited to have a significant impact on nationwide health or child survival conditions.

### Nutrition

CDIE found little evidence regarding the effectiveness of A.I.D.'s nutrition activities in the six countries that were evaluated. Like water and sanitation, nutrition activities tend to be peripheral parts of A.I.D. child survival programs, often supported by PL 480 or other sources rather than by the Child Survival Account. Breast-feeding, growth monitoring, micronutrient supplementation, and other nutrition-related interventions are often implemented as pilot projects, PVO activities, or limited-scale work supported by central A.I.D./Washington contracts rather than by the bilateral child survival program in the country. As a result, nutrition activities do not achieve massive, national-scale coverage.

### Locally Initiated Interventions

A.I.D.'s Child Survival Program began in the mid-1980s with a fairly standardized approach and set of interventions but has evolved toward a more field-driven approach with greater flexibility. Local initiatives supported by A.I.D. are typically small-scale demonstration or operations-research activities that are trying to develop responses to localized health problems affecting infants and children. Although such initiatives do not immediately achieve massive, national-scale coverage, they help prepare for future services that may be offered by national programs.

### Quality of Care

Child survival by its nature is an effort to get minimal basic services quickly to as many people as possible. As a result, CDIE observed that the bulk of A.I.D.'s Child Survival Program has concentrated on quantitative results, principally expanding coverage. However, quality of care has been a parallel concern from the beginning and seems to be gaining more attention in A.I.D.'s country programs along with the related issues of sustainability and institutionalization. Overall, the quality of care provided by child survival programs is not high by traditional medical standards. Massive campaigns are not permanent or dependable services for clients. Heavy use of community volunteers and minimally trained paraprofessionals results in high turnover and little capability to respond to complicated health conditions. The constellation of services offered is very limited. Facilities, if any exist, are spartan. Although CDIE's focus groups in Bolivia showed the importance of

quality of care in attracting and keeping clients, it must be remembered that in the context of typical program beneficiaries minimal services are better than none at all.

Institution Building

Where A.I.D. has tried to strengthen or create institutions to provide child survival services, evidence indicates that it has often been successful. In three of the six countries Indonesia, Bolivia, and Morocco A.I.D. has supported innovative institutions that represent breakthroughs in the cost-effective delivery of services. In Malawi, institutional strengthening is A.I.D.'s principal child survival objective, but it is too soon to determine how successful the Agency has been. Compared with other donors, A.I.D. appears to have some important comparative advantages in providing the kinds of training, technical assistance, and commodities that effectively strengthen or create institutions in the child survival area. A.I.D.'s success in institutional strengthening seems to be largely unrecognized because program documentation, such as the Agency's Annual Report to Congress, concentrates mainly on the direct health effects of the Child Survival Program.

Impact

"Impact" refers to the longer term national development consequences of a program's activities. For this assessment, impact is measured principally as improvement in infant and child mortality and morbidity rates resulting, in part, from the A.I.D. Child Survival Program.

Impact data in the case studies came from several sources. One source was each country's national health statistics, which in most cases report mortality and morbidity rates based on service statistics from ministry of health facilities. These national health statistics are sometimes not very precise and do not reflect illnesses and deaths that do not occur in ministry facilities. Other statistics come from death registrations and from national censuses. In most cases the best single source of information on impact was survey data, much of it from A.I.D.-supported Demographic and Health Surveys (DHS). The DHS and similar surveys gather detailed information on a wide range of health, reproductive, and socioeconomic phenomena based on representative national samples of women of reproductive age. CDIE's field evaluation teams found that the A.I.D.-supported health surveys serve A.I.D. and other users as vital sources of statistical information for planning and policymaking. The surveys are accurate and credible and are often the primary or only source of reliable health information for the donor community, PVOs, and health ministries. When repeated every few years, the surveys provide time-series data essential for tracking the direction and magnitude of change in many critical indicators.

Another impact measurement problem was estimating the amount of program impact attributable to A.I.D. assistance. Infant

mortality rates are influenced by inputs from international donors and PVOs, national public and private health services, and many exogenous socioeconomic factors. Except in the event of carefully controlled pilot projects, health impacts measured in the aggregate do not differentiate in any way among the various factors that influence mortality. For this reason CDIE's evaluation teams could only try to infer from circumstantial evidence whether A.I.D.'s inputs seemed to be making a significant contribution to overall national programs, permitting A.I.D. to share some portion of the credit for the impact that was observed.

Findings

The World Health Organization estimates that immunization programs today prevent some 3.2 million deaths each year from measles, neonatal tetanus, and pertussis, as well as some 440,000 cases of paralytic poliomyelitis. In developing countries (excluding China), infant mortality declined from 106 deaths per 1,000 live births at the beginning of the 1980s to 95 in 1985 and to 83 in 1991. Deaths among children under 5 years of age declined from 167 deaths per 1,000 live births in 1980 to 149 in 1985 and to 130 in 1991.

As in the rest of the world, health conditions in A.I.D.-assisted countries have generally been improving (see Figure 2). In those countries, average infant mortality rates declined by 10 percent since the program began in 1985, from 97 infant deaths per 1,000 live births to 87 deaths per 1,000 live births in 1991. In some countries with strong programs, declines were as high as 25 to 50 percent.

Box 2 summarizes some of the evidence concerning the impact of A.I.D.'s child survival assistance in the six countries evaluated.

Attribution of Impact to A.I.D.

There is fairly convincing circumstantial evidence that declines in infant mortality rates are attributable in part to A.I.D. Child Survival Program interventions. The reduction in vaccine-preventable childhood diseases, for example, has been a major contributor to reduction in infant mortality rates, and vaccination services in all countries are supplied almost exclusively by the countries' national child survival programs. Furthermore, the Haiti case study showed that Child Survival Program inputs can have positive health impacts even when other important factors (the economy and political climate, for example) are unfavorable, thus demonstrating the possibility of achieving positive program results independently of other contextual forces that are commonly considered necessary for program success. Epidemiological studies consistently show strong statistical relationships between public health efforts to attack particular childhood diseases (e.g., measles and polio) and national rates of infection among children. Finally, interviews with beneficiaries and providers supplied strong qualitative

evidence of program impact. Beneficiaries and providers uniformly reported that in their experience in the field, child survival interventions directly reduce childhood mortality and morbidity. If national child survival efforts are having impact on infant mortality rates, A.I.D. can take a significant share of the credit for improvement in countries where the Agency contributes a significant portion of the resources used in national programs. Furthermore, because A.I.D.'s 22 emphasis countries represent two-thirds of total worldwide infant mortality, it is reasonable to conclude that A.I.D. is making a significant contribution to worldwide reduction of infant mortality.

Impact of A.I.D.'s Health Interventions

All of the different child survival health interventions for mothers and children that A.I.D. has used can have an impact on child mortality and morbidity rates, but they have different characteristics and features, making some interventions more suitable than others for future A.I.D. child survival programming. A.I.D.'s main health interventions are discussed in some detail in Section 4 of this paper. Table 1 summarizes general findings and recommendations concerning the impact of A.I.D.-supported child survival health interventions.

Impact of Local Initiatives

A.I.D. Child Survival Programs have taken on some of the most vexing threats to children's health in particular country programs, including malaria and AIDS in Malawi, dengue fever in Indonesia, and Chagas' disease in Bolivia. The local A.I.D. initiatives observed in the six countries were generally pilot efforts that were limited in coverage and therefore did not have measurable impact on national infant mortality rates. However, the initiatives were targeted on diseases that infect and kill infants and children (along with other age groups) and thus could contribute to future reduction in infant and child mortality if promising approaches are replicated.

Impact on Institutions

In some countries A.I.D. is having important institutional impact on the local organizations that deliver child survival services. In three of the six country programs A.I.D. is taking the initiative in developing innovative and unusual institutional arrangements to improve the delivery of child survival services. This programming has a different kind of impact, not immediately and directly affecting mortality and morbidity indicators. However, the long-term impact should be permanent improvement in health and child survival programs, resulting in permanently low infant mortality.

Sustainability

For the purpose of this discussion, sustainability has two dimensions. The first is institutional sustainability, which considers whether a provider has the capability and resources

(i.e., infrastructure, staff, administrative systems, and stature) to provide effective services on a permanent basis without outside help. The second dimension of sustainability is financial sustainability, the ability of a provider to generate enough income to support itself when A.I.D. funding is no longer available.

## Findings

Box 3 summarizes some of the findings from the six country case studies with regard to sustainability.

Overall, sustainability issues appear to be a growing source of concern and attention in the field, for both A.I.D. field staff and local service providers supported by A.I.D. In the early years of the Child Survival Program, sustainability was identified in Agency policy documents as a program objective, but the concern which consumed most energy, attention, and resources was getting results in terms of coverage of basic health services. The problem now for the more mature country programs is how to sustain services when A.I.D. support ends.

In several of the countries evaluated, A.I.D. entered into its programs without clear, long-range institutional-development objectives, without plans and criteria for phasing out A.I.D. assistance, and without a strategy for helping local services become financially self-sustaining. Like most other donors and host-country cooperating agencies, A.I.D. typically concentrated on service coverage and quick impact on basic health indicators. This has been both a strength and a weakness of the Agency's overall program. The specificity of the program's health objectives and its impressive progress toward meeting them have made the Child Survival Program a developmental and political superstar. However, the program has created massive new services and demand for additional and better-quality services that require large sums of money on a permanent basis. Growing dependency on external donors in the health sector, then, has been an unintended consequence of child survival efforts in many countries.

In the six countries evaluated, generous donor support was available for child survival health services, especially for vaccinations. United Nations agencies, PVOs, multilateral donors, and many other bilateral donors enjoy supporting the quick and popular child survival interventions. On the other hand, few have much stomach for the more unglamorous and sometimes frustrating work of building institutions and financial sustainability.

## Institutional Sustainability

Although the evaluation teams observed, with the benefit of hindsight, that A.I.D. seemed to have sometimes given too much priority to supporting service delivery and too little priority to institutional strengthening, the evaluation teams found some impressive A.I.D. results on the institutional development front in several countries. In interviews with A.I.D. field staff and

field representatives of other donors, it became clear that A.I.D. has special experience and capability in institution building that could be applied more broadly in its assistance to national child survival efforts. In many development sectors, A.I.D. has provided long-term support for efforts to improve the human resources, facilities, and administrative systems of developing country institutions. A.I.D.'s ability to provide grant funding for technical assistance and training components under long-running projects makes the Agency especially well suited to provide this kind of assistance. Experience in three of the six case studies demonstrates that when A.I.D. makes a concerted effort in the areas of institution building and financial sustainability, it can make solid progress and sometimes score real breakthroughs. Unless there is more creative and focused work in these areas over the next decade, the health benefits that have been achieved over the last decade could be lost. In many countries, A.I.D. could play a leadership role among child survival donors in supporting institutional strengthening. Some areas in which institutional strengthening is needed in many countries are health staff training, logistics, administrative systems, supervision, equipment, planning, evaluation, management information, and public information.

Financial Sustainability

There is no easy solution to the problem of permanent financial sustainability in the child survival area. Even relatively low-cost, primary care technologies involve substantial recurrent costs if permanent universal coverage and acceptable quality of care are objectives. Adequate local resources simply are not available in extremely poor developing countries to reduce infant mortality to an acceptable level and to continue to offer good services on a permanent basis.

Nevertheless, a number of A.I.D.-supported initiatives seen by the CDIE evaluation team still appear to have potential for improving the prospects of approaching financial sustainability and reducing donor dependency in the future. The following are some examples:

1. Efficiency improvements. The A.I.D. Child Survival Programs in Morocco, Indonesia, and Bolivia have supported different innovative institutional arrangements that lower the cost and expand the coverage of basic services. Different combinations of volunteer and paraprofessional health workers and outreach services to local communities and homes have better sustainability prospects than more expensive permanent, professionally staffed health facilities.

2. Endowments. A.I.D.-capitalized endowments appear to hold great promise for promoting long-term sustainability of child survival services, at least in the private sector. A.I.D. is establishing a large endowment in Bolivia that will permanently provide income to a consortium of PVOs for their child survival services. If set up carefully, endowments can provide predictable income for services on a permanent basis, protect services against

devaluations and politics, and eliminate or reduce the costly need of many health organizations to find new grant funds every year.

3. Charging fees for services. It is sometimes argued that the poor cannot or will not pay for health services or that it is unreasonable to require the poor to pay for health services when other basic services, such as education, are free. A.I.D.'s experience in Bolivia seems to show otherwise. Both the public sector and the private sector are charging fees for health services to the working poor. Fees charged for curative services are high enough to subsidize basic child survival services. The Bolivian NGO, PROSALUD, is able to recover all of its costs in this way, while providing good quality care. Even more surprising is the finding that emerged from CDIE's focus groups that women in Bolivia prefer to pay for the services they receive and prefer higher fees to lower fees. This is because they associate the amount they pay with the quality of service they receive, and they want higher quality attention and medications for their children. A.I.D. is testing the replicability of this finding with other socioeconomic groups, but it appears to be a finding that should be applied to other programs.

A.I.D.'s efforts to use policy dialogue to encourage cooperating governments to reallocate their resources to provide more funding for primary health care have not been very successful. This approach is discussed in Section 5.

What Should A.I.D. Emphasize?

Among the three major child survival assistance areas observed by the evaluation providing health services for mothers and children, strengthening national health-care institutions, and promoting financial sustainability how should A.I.D. set its priorities and allocate its resources?

To begin to answer this question, it is important to observe that these three assistance areas are best thought of not as three mutually exclusive approaches, but rather as three different stages along a continuum of assistance strategies. The first and most basic kind of assistance, normally offered to countries with the least developed health services, is support for delivering basic health services directly to mothers and children. The second, intermediate level of assistance, is institutional strengthening, usually emphasized after coverage of basic life-saving health services for mothers and children begin to reach acceptable levels. The third, and usually final, area is assistance in improving financial sustainability.

Recommendations

Three general recommendations emerged from the six country studies concerning the allocation of A.I.D. Child Survival Program resources among these three major assistance areas. Provide assistance in country programs in all three activity areas health services for mothers and children, institutional

strengthening, and financial sustainability.

A.I.D.'s country child survival strategies should take account of all three assistance areas from the onset. Except in emergency cases, assistance should not begin in a country until A.I.D. has a long-term country strategy with specific objectives in all three areas. Without feasible plans for developing a sound institutional base and permanent sources of funding, gains in the area of health services for mothers and children may prove transitory.

A.I.D. country programs should generally support simultaneous activities in all three assistance areas throughout the life of country programs, although the area of primary emphasis may vary from one program phase to another and from country to country, depending on circumstances. In general, experience seems to show that it is advantageous for A.I.D. to program concurrent assistance in all three areas in country programs so that the Agency can promote balance in the national program, coordinate with other donor activities on all three fronts, and ensure that short-term and long-term objectives are coordinated and phased. How A.I.D. can determine which of the three areas should receive the greatest emphasis in the allocation of its resources in country programs is discussed in the following recommendation. Determine the primary emphasis area for A.I.D. support to country programs based on health conditions, existing health services, political and socioeconomic conditions, and other donor support.

Figure 3 is a simplified decision model, based on the country case studies, showing how A.I.D. can determine its primary area of emphasis in country-specific child survival programs. Generally, in countries where infant mortality rates are very high, coverage of health services deficient, and other donor resources inadequate, A.I.D.'s program of assistance should initially emphasize health services for mothers and children. The selection of specific health interventions for A.I.D. support should depend on the causes of mortality and morbidity in the country, the appropriateness of available low-cost technologies to local conditions, and the state of existing host country and donor interventions.

Subsequently, as the coverage of health services improves to acceptable levels, the emphasis of A.I.D. assistance can shift to institutional strengthening.

A.I.D. should avoid the temptation to declare victory and disengage based only on improved health conditions, which often reflect high and unsustainable levels of external donor support. Each country child survival strategy should include institutional targets and indicators based on analysis of the country's health care delivery system. Depending on local circumstances, institutional strengthening activities may deal with such factors as staff training, community infrastructure, management information and planning capability, outreach and promotion mechanisms, logistical systems integration of special vertical services into established primary health care programs, and

improvement of health NGOs to supplement government health ministries.

Finally, as health services for mothers and children and the local institutional base are consolidated, A.I.D. can shift its emphasis to promoting permanent financial sustainability. Financial sustainability is the assistance area that has received least attention and is easiest to defer. Assistance activities promoting financial sustainability require persistence and ingenuity because there are no standard, proven approaches that will work everywhere. Depending on local circumstances, A.I.D.-supported activities in this area may include promotion of policy dialogue to reform the national health budget, establishment of fee-for-service arrangements, development of self-financing private health institutions, cutting of the costs of existing services, and creation of endowments.
Give greater emphasis programwide to institutional strengthening and financial sustainability.

A.I.D. views its support for national child survival programs as development assistance, not just humanitarian relief. Its child survival strategy states that "A.I.D.'s focus will be on developing a sustained capacity in each country to effectively provide ... important child survival interventions...."(A.I.D. 1986). It was not possible to determine how A.I.D. Child Survival resources Agencywide are allocated among the three assistance areas, but A.I.D.'s program indicators and its annual reports to Congress emphasize health services for mothers and children, giving the impression that institution-building and financial sustainability have received less attention.

There are two reasons for recommending higher programwide priority for institutional strengthening and financial sustainability. First, experience documented in three of the six country case studies (Haiti, Morocco, and Egypt) shows that heavy concentration on expanding health services for mothers and children, without commensurate attention to the other two areas, may distort countries' allocation of their own health resources, create heavy dependency on external donors, and make it difficult for A.I.D. to extricate itself after a reasonable period of time.

Second, many other donors prefer to subsidize health services for mothers and children, while few are interested in or have the capability for the more complex and less gratifying work of institution building and promoting financial sustainability. A.I.D.'s permanent in-country technical staff, its sophisticated grant-financed technical assistance, its institutional capability to provide large-scale in-country and participant training, and the political stature it enjoys in many countries give it unique comparative advantages over other donors to provide this kind of assistance.

At the same time, A.I.D. should not abandon assistance for health services for mothers and children. Supporting health services produces proven health benefits and generates essential political and public opinion support for the program.

## Efficiency

### Findings

Economic issues concerning costs, cost-effectiveness, and cost-benefit indicators were not systematically analyzed in the CDIE assessment. However, economic questions arose regularly in interviews and in Mission documentation, and two of the CDIE field studies conducted some rough economic analyses. Based on a small amount of evaluation work in this area, then, CDIE drew the tentative general conclusions discussed below.

### Use of Economic Data for Child Survival Policymaking

Methodological problems make programwide efficiency computations, in the aggregate, too imprecise to be of much use to A.I.D. policymakers. At the project level, costs, cost-effectiveness, and benefits can sometimes be computed quite accurately. At the country level, however, such computations become less precise. Doctors, health workers, and health facilities address a wide variety of health problems, and it is not possible to assign the costs of such services to particular diseases. Also, different projects, donors, and implementing units often work under different circumstances and experience very different costs. Finally, at the worldwide level, costs, benefits, and cost-effectiveness indicators become even less interpretable because the circumstances in which services are provided differ so much among countries. Furthermore, cost data are often not available, and, when they are available, the ways in which they are gathered and analyzed are not consistent from country to country. As a result, cost figures vary radically among countries. For example, estimates of cost per death averted by ORT vary from $100 to $8,000 and estimates of the cost per death averted by water and sanitation services vary from $1,250 to $19,200, depending on country and program circumstances, the way costs are computed, and other methodological differences (Stewart 1988).

### Efficiency of the Child Survival Approach

It is well documented in the general literature that preventive health interventions are more cost effective than curative interventions. CDIE's observations confirmed this finding. For example, in Bolivia CDIE computed approximate costs of treating similar conditions with preventive child survival techniques and compared them with the cost of curative hospital treatment. Illustrative results are presented in Table 2.

### Overall Cost-Effectiveness of Interventions

Costs and cost-effectiveness of different primary health care interventions vary drastically according to many different factors, including technology costs, personnel and infrastructure costs, prevalence of the condition being treated, and demographic

characteristics of the affected population. Available cost-effectiveness data, while imprecise, at least provide a fairly consistent rank-ordering of interventions. Immunizations are the most cost-effective intervention in areas where the incidence of communicable infections is high. The best available compilation of cost-effectiveness data (Jamison and Mosley 1990) provides some average costs of child survival interventions, along with the admonition that the figures represent such a large range of varying results that they should not be used alone for decision-making purposes. Some of the results are presented in Table 3, showing a ranking of interventions according to the cost per "discounted health life year."

### Cost-Benefit Estimation

Results of benefit-cost analyses vary widely but generally show positive rates of return of moderate size. For example, a benefit-cost analysis undertaken by CDIE as part of the Bolivia case study found a modest internal rate of return of just under 10 percent, a rate that is acceptable but not particularly high. The CDIE team in Malawi used a "human capital" approach and concluded that, even when using very conservative estimates, reductions in deaths resulting from the Child Survival Program warrant A.I.D.'s level of investment in Malawi because of the increased earnings survivors will generate. Programwide, more research is needed to understand the value of time and health to people in A.I.D.-assisted countries. A standardized outcome indicator and methodology must be developed before meaningful benefit-cost conclusions can be made. Nevertheless, human lives have a nonmonetary value that makes them intrinsically worth saving and improving, making comparability with benefit-cost analyses of projects where all benefits can be quantified in economic terms questionable. For this reason, benefit-cost criteria are not as fundamental to the rationale of the Child Survival Program as they are to other programs.

### Recommendation

Develop a uniform methodology for computing and reporting costs, cost-effectiveness, and economic benefits of child survival interventions.

## 4. A.I.D.'s Child Survival Health Interventions

### Immunizations

### Findings

By most measures, the Child Survival Expanded Program of Immunization (EPI) supported by A.I.D. and other donors has been the most successful of the child survival health interventions. Worldwide, UNICEF has generally been the lead donor in vaccination programs, and A.I.D. has assumed a collaborative role. In different countries, A.I.D., in coordination with UNICEF and other donors, has provided commodities (e.g., syringes, vaccines, refrigerators), training for local staff, technical

advisers, and funding for operating costs.

In A.I.D.-assisted countries, DPT3 vaccination coverage for children ages 12 to 23 months rose from 39 percent in 1985 to 67 percent in 1992. Measles coverage more than doubled from 24 to 60 percent. Immunization programs now avert an estimated 3.2 million child deaths each year from measles, pertussis, and neonatal tetanus. Figure 4 illustrates the growth of DPT3 vaccination coverage in A.I.D.-assisted countries in different regions of the world. Figure 5 shows A.I.D.'s estimate of under 5 deaths averted by vaccination programs, in the aggregate, in A.I.D.-assisted countries.

All six of the CDIE country case studies documented the success of immunizations as an A.I.D.-supported child survival intervention. One country in which A.I.D. has played a lead role among donors is Indonesia, where A.I.D. has been the leading supporter of the national immunization program for 10 years. A.I.D. has provided technical assistance from the U.S. Centers for Disease Control, vaccines and cold-chain commodities, training for more than 5,000 health personnel, and funding support for operating expenses. As a result, immunization coverage has increased dramatically in Indonesia (see Figure 6). Coverage results were similarly impressive in other case studies. Figure 7 shows how immunization coverage in Bolivia has increased since the onset of A.I.D. child survival assistance.

The results of the rapid increases in immunization coverage have been heartening. Epidemiological studies and DHSs have documented significant declines in the incidence of vaccine-preventable childhood diseases. An example is presented in Figure 8 showing the incidence of childhood diseases in Morocco.

Vaccinating infants, children, and mothers in even the poorest countries, such as Haiti and Malawi, has proven to be technically feasible, affordable, and politically attractive. For these reasons vaccination programs have been the highest priority child survival intervention in most countries, effectively mobilizing political support, budgetary resources, donors, public participation, and involvement by the public health system. Through immunization programs, donors gain credibility with ministries of health, and ministries of health gain support from the citizenry and the political establishment. Politically, then, immunization services create a "halo effect" that results in broad support for health ministries and for donors, making it easier to work in other related but less glamorous activities, such as institutional strengthening and financial sustainability. Despite their success, immunizations present some lingering concerns for A.I.D. One is a ceiling effect on impact. Coverage in many A.I.D. countries is approaching levels adequate to control or even eradicate some of the vaccine-preventable childhood diseases, meaning that impact is leveling off. There is a danger that service providers and donors, feeling that the problem of vaccine-preventable diseases has been solved, will lose interest in vaccination services. It is important to remember that failure to continuously provide vaccinations can

result in rapid resurgence of diseases, epidemics, and high infant mortality. Also, the development of effective vaccination services creates the conditions for piggybacking other services at low cost. The capability that has been created in many countries should be used in the future to sustain existing vaccination services, to provide important new vaccines (e.g., hepatitis B, yellow fever, hemophilus) as they become available, and to provide other child survival services, such as ORT.

Recommendation

Provide A.I.D. support for immunizations even in countries where other organizations have historically taken the lead. In addition to health benefits, supporting immunizations can generate political credibility and public goodwill that are beneficial to other less dramatic components of a diversified child survival program.

Oral Rehydration Therapy

Findings

Judging from the six country case studies, control of diarrheal diseases, for which the best available intervention is ORT, has not been well implemented in many of A.I.D.'s country child survival programs. A.I.D.-supported country programs have often failed to provide adequate support services, such as mass media promotion, logistical support, and staff training to achieve the powerful impact on infant mortality that ORT is capable of providing.

Among the six CDIE case studies, only in Egypt was A.I.D. getting good results with ORT. The other five countries were making progress, but coverage and impact were disappointing. The results of the Egypt program show that ORT works and can be effectively implemented by A.I.D. Since 1983, ORT use in Egypt, with heavy A.I.D. support, has increased dramatically. Local production of salts has grown to meet the high level of local demand 30 million packets annually. A major national mass media campaign has run for several years, and survey results show that over two-thirds of mothers make use of ORT when their babies suffer from diarrhea and 98 percent of users know how to mix and give the solution correctly. Consequently, the death rate from diarrheal diseases among Egyptian infants and children has declined more rapidly than has the death rate from other childhood diseases, as shown in Figure 9.

Unfortunately, the success of ORT in Egypt is the exception rather than the rule. The other countries in CDIE's sample included ORT in their child survival programs but did not support the activities adequately. In Bolivia, for example, A.I.D. provided oral rehydration salts to the Ministry of Health, accepting the Ministry's assurance that it would take care of the rest. Unfortunately, inadequate logistical support led to distribution problems, weak promotion resulted in low levels of demand, and poor training of health staff led to little use of

ORT in the public health system. As a result, diarrhea today causes 64 percent of deaths of children ages 1 to 4 years in Bolivia, and only about 25 percent of diarrhea cases are treated by ORT.

In Indonesia A.I.D. did not include ORT in its bilateral program, relying instead on available Washington projects. ORT is a part of the integrated packages of health services provided through the Indonesian community outreach system, but it has not received the kind of priority or resources that have been given to immunizations and family planning. About 25 percent of Indonesian mothers report using ORT for their children's last episode of diarrhea.

In Haiti ORT had higher priority in the early years of the program, but it was associated with the discredited Duvalier regime and lost its prestige when the Government changed. About 27 percent of child deaths were attributed to diarrhea in Haiti, yet in 1987 only 14 percent of children with diarrhea were given ORT. Mothers interviewed during the field evaluation reported that they did not know how to mix the solution and packets were not available. In Morocco CDIE found that diarrhea was the major cause of infant mortality; one in four children under 5 years old reportedly had suffered from diarrhea during the 2-week period before the DHS interviews. Yet only 16 percent of Moroccan children with diarrhea received ORT. In contrast to immunizations and family planning, control of diarrheal diseases in Morocco was not a priority activity for the A.I.D. Child Survival Program. Similarly, in Malawi ORT coverage was very low compared with the coverage achieved by immunizations, and diarrhea remains a major killer of children.

A.I.D. programwide evidence shows that the immunization effort has been more effectively implemented than has control of diarrheal diseases. Table 4 compares overall ORT use rates with immunization coverage in A.I.D.'s 22 child survival emphasis countries, by region.

The ORT figures reported in Table 4 do not represent a program failure. Worldwide use of ORT increased from 12 percent of diarrheal episodes to 36 percent between 1984 and 1991, saving an estimated one million lives per year. However, the better performance of immunization components demonstrates the potential for achieving better results with ORT.

A review of early Agency policy documents shows that ORT was initially given equal billing with immunizations as one of the "twin engines" of A.I.D.'s Child Survival Program. Furthermore, since United Nations agencies were already strong lead donors in support of immunizations, there was reportedly a notion that ORT would be A.I.D.'s special intervention, complementing the United Nations' heavy support for vaccinations.

Did A.I.D. later lose interest in ORT because of the appeal of supporting immunization programs? In terms of funding it did not. Table 5 shows that A.I.D. has not consistently favored

immunizations over ORT by large amounts in terms of overall funding levels.

Despite the availability of funding for diarrheal disease control, it was clear to CDIE in its six country evaluations that immunizations are the favorite intervention of donors and host countries. ORT is often implemented as a commodity drop, while support for immunization programs is more comprehensive, including broad support for public information and promotion, staff training, and logistical needs.

Several factors appear to contribute to A.I.D.'s disappointing ORT results in some countries. Momentum and political will are two important factors. Vaccination campaigns are happy and highly visible public events, attracting enthusiastic participation by politicians and the public. They also have been operating longer than has ORT, and they developed a good "head of steam" during the late 1970s and early 1980s. Another factor is complexity. With vaccinations a child acquires permanent immunity, whereas ORT has to be provided during each episode of diarrhea throughout the childhood years. Demands on the user is another consideration. For vaccinations, all a parent must do is show up and let the child be vaccinated, whereas mixing and administering the ORS solution are more complex and difficult. Experience shows that proper use of ORT by parents requires training, motivation, and followup. Furthermore, the behaviors required of the parent for ORT may be at variance with traditional practices. Moreover, ORT does not cure the diarrhea, sometimes leading parents who are hoping for a cure of the symptoms to discontinue the treatment. Experience, documented in five of the six CDIE country case studies, shows that simply making ORS available is not sufficient for success. While still not complicated compared with other curative health interventions, ORT requires that health providers develop effective training, administrative, and logistical systems. The costs and complexity of providing the support services needed for an effective program, while not excessive, apparently have been underestimated in many A.I.D. country programs.

To test the notion that support services are an important determinant of ORT program performance, CDIE checked to determine which of the A.I.D. child survival programs in the 22 emphasis countries provided strong support for mass media and public communication services. The results are summarized in Table 6. The difference in coverage levels is large and statistically significant, {Footnote 3} lending strong additional support to the notion, based on CDIE's evaluations of 6 of the 22 countries, that strong public communication support is a key determinant of ORT performance. Other problems that were found in the case studies were logistical support, manufacturing problems, and lack of interest at the policy level.

In summary, the assessment found that ORT can be an effective intervention for reducing infant mortality but that A.I.D.'s Child Survival Program has not performed as well as it could have because it often underestimated the support requirements. The

Agency appears to have missed an opportunity for a big success but is poised for a breakthrough if it can redesign its ORT components with these considerations in mind.

Recommendations

Raise the profile and priority of ORT in Agency child survival policy and strategy, emphasizing the need for comprehensive implementation strategies.

Develop an ORT approach that takes account of the complexities of ORT and specifies adequate levels of support services.

Emphasize information, education, and communication (IEC) activities especially designed to promote and support ORT.

Reproductive Risk

Findings

In many countries, the A.I.D. Child Survival Program, often in combination with A.I.D. population sector programming, has been effectively reducing the incidence of high-risk births. High-risk births are births that are too closely spaced together or that happen when the mother is too young or too old or has had many prior pregnancies. High-risk births result in large numbers of unnecessary infant deaths, as well as in many maternal deaths. The CDIE case studies confirmed that reducing high-risk births with family planning methods is an effective child survival intervention. Figures 10 and 11 show a strikingly similar and very strong relationship between birth interval and infant mortality in two different countries, Bolivia and Morocco. Family planning is an intervention for which A.I.D. has special interest and responsibility in much of the world as the lead donor or as the only donor. In countries such as Bolivia, A.I.D. has presented family planning as a child survival and maternal survival activity (rather than as a birth control program to reduce family size and population growth). This approach, at least in some countries, seems to make family planning less sensitive and more acceptable to the country's political and medical authorities. In Morocco family planning is the principal A.I.D. child survival intervention, and surveys have demonstrated dramatic birth-interval effects on infant mortality. In Indonesia family planning has become a top priority for A.I.D. and the Government of Indonesia, and the contraceptive prevalence rate has increased from negligible levels to 48 percent. In two other countries, Haiti and Malawi, CDIE found that A.I.D. has not succeeded in making rapid progress in this area because of lower priority in the A.I.D. program and more difficult cultural and economic barriers.

Promoting family planning to reduce reproductive risk is an area in which A.I.D. has a clear comparative advantage over other donors by virtue of its long experience and commitment. Population is one of A.I.D.'s biggest and best established sector programs, decades older than child survival. In some A.I.D.

country programs, family planning assistance is programmed separately from child survival; in others it is treated as a component of the Child Survival Program.

Whether such assistance is viewed separately or as part of the Child Survival Program, ample evidence exists in several of the six country case studies, reinforced by evidence from other countries in CDIE's companion assessment of the Agency's Population Program, of important synergies between family planning and child survival interventions. When children are surviving, families apparently are more inclined to limit the number of births they have; when many children are dying, families have more births to replace the children who die. Furthermore, when families limit the number of children they have, the chances of the children surviving are improved. Thus, family planning and child survival programming directly reinforce each other.

Family planning is not a quick-impact child survival intervention that produces immediate results on infant mortality rates. However, because of its proven long-range health impact and because other donors have historically looked to A.I.D. for leadership in the family planning area, it is an intervention that should receive special attention and priority in the A.I.D. Child Survival Program.

Recommendations

Feature family planning as a key component of most country child survival programs.

Strengthen programmatic coordination between A.I.D. population and child survival activities to enhance the synergy.

Acute Respiratory Infections

Findings

In three of the six case studies, CDIE found that A.I.D. has had some small-scale success fighting acute respiratory infections. Overall, however, it appeared that lack of a simple, low-cost intervention restricts the effectiveness and impact of A.I.D.'s interventions.

Acute respiratory infections have emerged as the leading cause of child death worldwide, responsible for one-third (4.3 million) of all deaths of children under age 5. About one-fifth of these deaths are due to respiratory complications from measles and pertussis, which are being reduced by child survival immunization services. However, many other bacterial acute respiratory infections require a case management approach in which a trained health worker identifies cases, prescribes and supports home treatment with antibiotics, and refers severe cases to a hospital.

Some A.I.D. child survival projects, such as the A.I.D. program

in Egypt, have attempted to implement case management approaches. The acute respiratory infection component of the Egypt program aims to improve the Ministry of Health's capacity for early detection, diagnosis, and treatment. Progress to date includes establishment of a research center and development of a comprehensive work plan for acute respiratory infection control. However, this component has stalled because of administrative problems, and there is no evidence of impact to date. In Indonesia and Bolivia, A.I.D. is funding small-scale operations research to try to develop and field-test cost-effective treatment approaches that can be implemented by the existing health system.

International and national research activities are presently under way some of them A.I.D. supported to develop more cost-effective case management approaches. However, until better interventions are developed, A.I.D.'s progress in reducing infant deaths from acute respiratory infections will continue to be slow. As other childhood infectious diseases are brought under control, acute respiratory infection is likely to receive increasing attention. For this reason, it is wise for A.I.D. to work on research and development activities of various kinds in hopes of developing better interventions.

Recommendations

Support research and development activities leading to more cost-effective interventions for acute respiratory infections. When practical and cost-effective interventions become available, increase operational support for reducing acute respiratory infection.

Nutrition

Findings

Poor nutrition is a major contributor to infant and child mortality, and improving nutrition is identified as one of A.I.D.'s original four core child survival activities. However in five of the six field evaluations of A.I.D. child survival programs, nutrition components of the child survival projects were not large and the evaluation teams were unable to identify clear evidence of national-scale impact.

Nutrition-related problems present a dilemma to A.I.D.'s Child Survival Program. One child in three in the developing world suffers from malnutrition, and malnutrition is a contributing factor in 60 percent of all child deaths. PL 480 feeding activities are A.I.D.'s biggest response to the problem in terms of funding and coverage, although PL 480 is not regarded as part of the child survival program in many A.I.D. countries. PL 480 is the largest food assistance program in the world, and it is reported to have a good record of institutional innovation and distribution. An important issue for A.I.D.'s consideration is whether better coordination of the Child Survival and PL 480 Programs could produce greater impact on child survival. It is

likely that PL 480-provided food is having impact on infant and child health conditions in some countries, but it was beyond the scope of this assessment to evaluate the impact of feeding programs.

Based on the six country studies, malnutrition is clearly too big a problem for A.I.D.'s Child Survival Program to solve alone and that the only comprehensive and permanent solution lies in overall macroeconomic development. Still, there are a few affordable health system interventions that can at least ameliorate the impact of malnutrition on child mortality. For example, in Morocco, although there is little acute malnutrition, chronic malnutrition affects 30 percent of rural children and 17 percent of urban children. The A.I.D. Child Survival Program provides growth monitoring, health education for parents, breast-feeding counseling, and a local weaning food supplement. In addition, the PL 480 Title II program provides food and nutrition education through Catholic Relief Services to 150,000 mothers for their two youngest children. There are no data concerning the nutritional impact of feeding services. Other studies show improvement in nutritional status overall, but given the overall improvement in living standards in Morocco it is hard to tell what the independent impact of A.I.D.'s nutritional interventions might have been.

In Haiti, 75 percent of children under age 5 are undernourished. With declining per capita food production, nutrition has become a major component of the A.I.D. Child Survival Program. A.I.D. is supporting growth monitoring, nutrition education, breast-feeding promotion, food supplementation, and vitamin A supplementation. Communities receiving this kind of intensive nutrition-related assistance from PVOs have experienced a two-third reduction in chronic malnutrition. The Title II feeding program has also had national impact, reaching 20 percent of all children in the country. A.I.D. views the Haiti nutrition program as a "safety net," keeping people alive until economic conditions improve. Until food production increases, there is little hope of significant or sustainable improvement in children's nutritional status.

Vitamin A supplementation has been shown in other studies to improve health and to reduce overall child mortality. Also, promotion of exclusive breast-feeding for the first 4 months of life, sometimes categorized as a nutrition intervention, appears to be a very cost-effective intervention that can reduce infant mortality by improving nutritional status while also protecting against infections and helping to space births. More than half of breast-fed infants in developing countries are receiving dangerous water-based drinks and other supplements to breast milk, simultaneously exposing them to diseases and reducing their nutritional status. These practices result in many unnecessary deaths, especially during the first year of life.

Recommendations

Increase program emphasis on vitamin A supplementation and

exclusive breast-feeding. Support other nutritional interventions in specific country programs if evaluations show that they are effective according to Child Survival Program criteria.
Analyze the child survival impact of PL 480 feeding programs and try to link them more effectively to child survival objectives.

Local Health Problems and Epidemics

Findings

A.I.D. field Missions have often been able to make use of Child Survival Program resources to respond to special local health problems and unexpected epidemics that affect child survival. A.I.D.'s flexibility in adapting interventions to local circumstances is an important comparative advantage A.I.D. has over some other donors. The local field Mission initiatives that were examined were not entirely consistent with the child survival approach, strictly defined. They were not quick, low-cost, life-saving health interventions. The diseases they addressed affect all age groups, not just children and infants. However, the initiatives were all dealing with life-threatening diseases, which could affect infants and children, and were working mostly on a limited scale to develop and test interventions that could in the long run reduce infant mortality. The interventions therefore appear to be a reasonable use of Child Survival Program resources.

Field Missions have to make complicated decisions about what activities are suitable child survival interventions. For example, in Bolivia a condition known as Chagas' disease is a major threat in many parts of the country. Although most victims die as adults, many are first infected as young children, so A.I.D. determined that fighting Chagas' disease was an appropriate child survival intervention. More than 80 percent of the country is Chagas endemic and 50 percent of the population is at risk. In some communities that were tested, 63 percent of the population (and 39 percent of children under age 10) proved to be seropositive. Among individuals who are infected, the mortality rate is estimated to be around 13 percent. A.I.D. has committed $3 million for a new Chagas' disease component for its bilateral child survival project. The component is developing ways of upgrading houses and spraying in an effort to keep the insect that carries the disease away from areas where children sleep. An analogous situation is the resurgence of chloroquine-resistant malaria in Malawi. A.I.D. has been able to program a portion of its Child Survival Program into research and development to implement prevention activities and to supply a new medication that one hopes will be effective against the new strain. Other examples of effective responses to local child-threatening conditions are A.I.D.'s effort to help fight dengue fever in Indonesia and HIV/AIDS in Haiti and Malawi.

An important note of caution, though, is that A.I.D. and its field Missions should not try to deal with every disease or health scare that comes along. Each Mission providing assistance in the health sector should have a child survival strategy that

identifies its priority problems and interventions. Only a small number of the most critical health problems should be addressed in each country, and a strong rationale in terms of cost, effectiveness, and impact should be included to justify each intervention that is supported.

Recommendations

Support cost-effective field initiatives responding to local health conditions that seriously threaten child survival, directly or indirectly.

As part of an updated program strategy, provide guidance to the field giving criteria for deciding when a particular health condition is appropriate for Child Survival Program support.

Safe Motherhood

Findings

Child survival is fundamentally a child-oriented program, and the importance of the mother is not given adequate attention. Several of the CDIE case studies found evidence that lack of prenatal care, inappropriate birthing practices, and poor postnatal care contribute significantly to unnecessary infant mortality. In Morocco, for example, the CDIE evaluation found that inadequate prenatal care and diet, too closely spaced births, and poor weaning practices have contributed to nearly one-half of all infant and child mortality. In Haiti, survey data showed that 86 percent of mothers give unnecessary and dangerous supplementary foods to babies during the first 3 months of life, contributing to the high death rate from diarrheal diseases.

Improving prenatal care, birthing practices, and breast-feeding are mainly behavioral changes on the part of mothers. As a result, educational and social marketing interventions to promote better practices are likely to have a high return in terms of improved program impact. In most A.I.D. country programs, these activities have been included but often do not receive high priority or much attention. These appear to be potentially high-impact, affordable interventions that should be emphasized in future programming.

Recommendation

Give increased priority to prenatal care, healthy birthing practices, and neonatal care in country child survival programs.

Water and Sanitation

Findings

In three of the six countries evaluated, evidence showed that community water and sanitation systems help reduce infant mortality locally. However, in all countries except Egypt, high infrastructure costs appear to make it impossible to replicate

successful local activities on a national scale. Many A.I.D. Missions have supported construction of rural community water systems and latrines using a variety of A.I.D. funding sources and implementing agencies. Activities have been supported under the centrally funded Water and Sanitation for Health (WASH) project, through PVOs, through Peace Corps, and through host-country governments using Economic Support Fund (ESF) and PL 480 local currency generations. The child survival rationale is that these installations directly attack the causes of diarrhea and other childhood diseases by providing uncontaminated water. Beneficiaries reported that health conditions in their communities had improved following water and sanitation installations, although the magnitude of this impact had not been quantitatively established in the six countries visited. Egypt is the one case study country in which A.I.D. is financing the construction of water and sanitation infrastructure on a large scale. As part of a major urban infrastructure effort, A.I.D. is funding new potable water and sewerage systems for Cairo. Beneficiaries believe that health conditions have improved in sections of the city that received the new services. Also, deaths from diarrheal diseases have declined. However, the impact of the water and sanitation infrastructure on health conditions, independent of other factors, has so far not been demonstrated empirically by evaluation studies, despite efforts to do so. In Morocco, A.I.D. provides small-scale support to a Peace Corps community water systems project. In Haiti, A.I.D. has provided $8 million for community water systems through CARE. The Haiti case study reports that the incidence of diarrhea was reduced in the communities that received new systems and that the systems were being effectively used and maintained by communities. One lesson learned from A.I.D.'s experience in Haiti and Bolivia is that community water systems fail unless there is strong community involvement from the beginning to ensure maintenance, cost recovery, and proper utilization of water.

Unfortunately, the cost of water installations even simple ones is high. With the possible exception of Egypt, A.I.D.'s Child Survival Program resources are not adequate to construct enough water systems to have a measurable impact on national health indicators in any country visited by CDIE evaluation teams. The national-scale results produced by investments in other child survival interventions appear to be larger than the results obtained from investing in water and sanitation. One possible strategy is for A.I.D. to finance community water and sanitation infrastructure from other accounts, including ESF and PL 480 local currency generations, saving resources from the Child Survival Account for the other more cost-effective interventions. Another strategy is to try to persuade multilateral donors to finance the infrastructure costs, with A.I.D. providing complementary support in the areas of community mobilization and education.

Recommendations

Do not provide major support for water and sanitation infrastructure from the Child Survival Account.

Coordinate with the multilateral donors in establishing water and sanitation systems, with A.I.D. providing support services such as education, promotion, and community mobilization.

## 5. Management Aspects of A.I.D.'s Child Survival Program

### Implementation

#### Findings

The CDIE assessment reached seven general findings concerning A.I.D.'s approach to implementing child survival assistance. First, A.I.D.'s practice of having permanent technical staff in each country is important to A.I.D.'s ability to design innovative projects, control vulnerability, and engage in policy dialogue. Second, A.I.D.'s objectives and approaches have multiplied as the program has evolved, and a new Agency child survival strategy is needed to refocus the program. Third, A.I.D.'s administrative requirements constantly complicate project implementation, resulting in lost time and wasted money. Fourth, A.I.D.'s practice of concentrating resources on a limited number of emphasis countries has resulted in measurable impact and thereby has strengthened the program. Fifth, providing central contractors to A.I.D. field Missions has helped get bilateral programs launched quickly. Sixth, the fact that child survival is a high-priority, congressionally mandated, and Washington-initiated A.I.D. program has not resulted in careless programming or precipitous disbursement of funds in the field. Finally, seventh, A.I.D.'s Child Survival Program has been successful in compiling and reporting its results on a programwide scale. Each of these findings is explained briefly below.

#### A.I.D. Staff

Among A.I.D.'s health sector staff, in Washington and in the field Missions, there is concern about long-term trends in staffing. Funding for the Child Survival Program has increased while the number of Agency direct hire health personnel to manage the program has decreased. A.I.D.'s Child Survival Program managers feel that reducing A.I.D. health personnel, while increasing the budget, is endangering the program's effectiveness and the Agency's ability to carefully manage the resources for results in the future. To try to compensate for the scarcity of U.S. direct hire health officers, A.I.D. is depending on a variety of temporary contracting mechanisms. The program's implementation and management depend to a surprising degree on an increasingly haphazard and improvised crew of temporaries assembled from different consulting companies, U.S. Government agencies, and universities. This approach has some advantages as well as some disadvantages. The advantage of depending substantially on temporary staff is that the program has the flexibility to use the services of highly qualified specialists whose expertise is not needed permanently. A disadvantage is that responsibility, lines of authority, and accountability are

sometimes unclear, resulting at times in confusion and conflict. Also, depending on contractors means that A.I.D. gives up management continuity and institutional memory and is not able to build the kind of seasoned in-house professional staff that it would like to have to design, implement, and evaluate its child survival programs.

In one of the six case studies, Bolivia, CDIE's evaluation team examined the relationship between A.I.D. staff and program performance. The A.I.D. Child Survival Program in Bolivia was probably the most complex of the six country programs evaluated in terms of research and development, innovation, and policy dialogue. This complexity was partly a function of an unusually large and strong health office staff in the Bolivia Mission. The office has a mix of highly qualified U.S. and Bolivian health officers, including a strong core of U.S. direct hire career health officers, a group of private institutional and personal services contractors, and additional technical staff brought in through special arrangements, such as interagency agreements and university fellowships. This diverse staff has been able to design and implement an elaborate and sophisticated program, with successful activities in such complex areas as financial sustainability, institutional strengthening in the public sector and private sector, administrative decentralization, private sector endowments, debt-for-development swaps, and research. Furthermore, the staff has been instrumental in achieving several policy dialogue breakthroughs, including charging fees for services, integrating private providers into the public health system, and initiating government-sponsored family planning services. This staff-intensive approach contrasts with simpler programs run by other donors (and by A.I.D. in other countries), where assistance consists mainly of commodity support, in which staff requirements are less.

A.I.D. needs to clarify its strategy, objectives, and approach in the child survival area and, based on this clarification, develop a well-reasoned staffing plan. Should A.I.D. determine that its strategy is to concentrate on achieving short-term health gains, a small core U.S. direct hire staff supported by temporary contract employees is all that is needed. A more comprehensive approach dealing simultaneously with health conditions, institutional strengthening, and financial sustainability, on the other hand, requires somewhat greater depth and permanence of professional staff. Decisions about staffing the A.I.D. program, then, should be part of the overall strategy review that is recommended by this assessment.

Recommendation

Implement a new overall staffing plan based on a comprehensive review of Agency child survival objectives and strategy.

Strategy

As the A.I.D. Child Survival Program has grown and gained experience since 1985, it has gradually become more complex and

less focused. A.I.D.'s Health Assistance Policy Paper was last revised in December 1986, and the A.I.D. child survival strategy was approved in April 1986. Subsequently, specific strategy papers were prepared on immunizations (1986), diarrheal disease control (1987), nutrition (1986), child spacing (1987), breast-feeding (1990), and acute respiratory infections (1991). Gradually, strategy making has shifted to regional bureaus and to field Missions. Decentralization of strategy making has mostly been healthy, making it possible for field Missions to adapt services to local conditions. However, to retain its identity as a strong Agency program, Child Survival needs to re-examine and articulate its overarching objectives, provide Agencywide standards for preparing country strategies, develop criteria for determining when specific local health problems justify A.I.D. assistance using child survival funding, identify new emphasis countries, develop phase-out criteria, identify activities and approaches that work and do not work based on accumulated experience, recommend staffing levels and categories, and determine priorities for less traditional child survival activities, such as institution building, sustainability, and health policy reform.

A.I.D. should also emphasize the importance of good country-level child survival strategies. A tendency in some country programs, unwittingly encouraged by the program's heavy use of single-intervention centrally funded contracts, has been to follow a piecemeal approach to child survival. Country strategies should be flexible, but all country programs should be based on a solid analysis of the health and institutional conditions that influence child survival in the country along with a clear and specific statement of A.I.D.'s objectives, priority interventions, implementation plans, time horizon, and program rationale.

Recommendations

Review and update A.I.D.'s overall Child Survival Program strategy.

Develop standards and procedures for individual country strategies.

A.I.D. Administrative Requirements

In CDIE's field evaluations, A.I.D.'s burdensome and inefficient administrative procedures were repeatedly identified as a source of frustration and a cause of less than optimal program performance. A.I.D. health staff spent great amounts of time performing A.I.D. paperwork and dealing with administrative complexities. Country staff reported that inappropriate and expensive commodities were sometimes purchased, good employees were lost, relationships with counterparts became strained, innovative approaches were passed over, and needed services were badly delayed because of U.S. Government and A.I.D. administrative requirements.

In Egypt, for example, it was reported that the Ministry of Health was reluctant to make use of available A.I.D. funds because of negative experiences with a prolonged A.I.D. audit (which failed to turn up serious problems). The country's expanded program of immunization would reportedly have made better progress were it not for the perception in the Ministry that A.I.D. is too difficult to deal with, which made the Ministry wary of using available A.I.D. money. In Bolivia, A.I.D. took the first 2 years out of its major 5-year child survival project simply to procure technical assistance services. This resulted in major delays and a loss of credibility during the important startup phase of the new public-sector community and child health project. Also in Bolivia, because of A.I.D. source and origin requirements for commodities, A.I.D.-supplied radiotelephones and vehicles proved very expensive and less serviceable than other locally available brands. The Ministry of Health complained of A.I.D.'s documentation requirements for local currency disbursements from PL 480 accounts, which made it impossible for the Government to meet its counterpart obligations. For field Missions, Washington requirements to report child survival funding from different functional accounts is a constant source of confusion and irritation.

Recommendation

As part of documenting 1994 program results for the Annual Report to Congress, add an analysis of administrative bottlenecks (e.g., procuring, disbursing, accounting, auditing, and reporting) along with an assessment of their impacts on the Child Survival Program; then identify specific actions for streamlining administrative procedures.

Emphasis Countries

The idea of concentrating resources on a limited number of well-suited countries to achieve measurable impact has worked fairly well. Although A.I.D.'s ability to concentrate resources in the emphasis countries has not been uniform, A.I.D. has still been able to point to significant changes in important health indicators in its emphasis countries in its Annual Report to Congress. Had the same amount of funding been spread over many more countries, the impact of the program would presumably have been less dramatic. Furthermore, A.I.D. Missions in other assisted countries have emulated the success of the emphasis countries, using bilateral health and population funding to support their own primary health care services. Thus, the concentration on the 22 emphasis countries has had a multiplier effect benefiting other countries.

A.I.D.'s concept of what constitutes "emphasis" is ambiguous in strategic terms. As some of the original emphasis countries approach their targets for coverage of core child survival services, they are not sure what to do next. Should country programs that have met their original coverage targets phase out their programs so that the resources can be redirected to new emphasis countries? Or should the programs build on their

success by taking on additional health problems, or shift attention to longer term objectives such as institutional strengthening and financial sustainability?

Recommendations

Retain the emphasis country concept in terms of concentrating resources on a limited number of objectives in a limited number of countries.

Define the strategic implications of "emphasis" in a new Agency child survival strategy by specifying the criteria for emphasis, guidelines for program objectives in emphasis countries, and phase-out criteria.

Central Contracts

The relatively heavy use of central contracts, compared with A.I.D.'s programs in other social sectors, has proved to be a mixed blessing. A.I.D. has used central contracts with buy-in provisions to "jump start" activities in emphasis countries, shortcutting time-consuming project development and procurement cycles. These arrangements also have made it possible for field Missions to share specialized technical experts, to standardize some activities (e.g., the DHS methodology and specifications for ORS) and to obtain economies of scale in commodity procurement. In many cases, the early central contracts spawned bilateral project activities as field Missions got up to speed with their own child survival interventions.

A disadvantage of the central contracts is that the health officers in field Missions do not have as much control over activities in their countries as they would like to have. Furthermore, central contractors are often reported to promote activities and company services that may be attractive to Missions simply because they are easily available and endorsed by A.I.D./Washington, even though they may not be the most appropriate for a particular country situation. The amount and kinds of services that central contractors can provide to field Missions are tightly defined and limited by their contracts. As a result, they are not always fully responsive to country needs, may be difficult to coordinate with other activities, and may not be well integrated into an overall country strategy.

Pressure to Expedite

There has been a persistent concern that pressure from Congress and A.I.D./Washington for quick results would cause field Missions to rush into large activities without adequate planning and disburse funds precipitously without proper monitoring. In the six country case studies, there was little evidence that the high political visibility of the program had stampeded A.I.D. into ill-advised activities. Most Missions reported that their programs were adequately funded but not overfunded.

Because child survival was a Washington initiative forced by

headquarters onto field Missions, there reportedly was some anxiety and grumbling in the Agency at the beginning. However, since then, the program has apparently been embraced by Agency field staff more readily and completely than have many other Washington-imposed "special concerns." Child survival, fundamentally, is a good fit with health needs in most developing countries, and the availability of new funds and the political enthusiasm for the program throughout the world appears in the balance to have been invigorating for the Agency's health sector and health officers.

Reporting

A.I.D.'s Child Survival Program has a centralized data service that compiles indicators from all country programs and prepares a summary report to Congress each year. This arrangement provides better program-level accountability for results than most other sectors in A.I.D. are able to provide and should be a model for the other sectors. A drawback of the A.I.D. database and its reports is its emphasis on indicators tracking the performance of health services. There is a need to develop and report better measures of progress in the areas of institutional strengthening and financial sustainability.

Private Sector

Findings

All six of the A.I.D. child survival programs are using private sector organizations. Private sector participation includes commercial health providers (private doctors and hospitals), local and international PVOs, and nonprofit health providers. In Malawi, for example, the private hospital association provides about one-half of all health services, charging for curative services and providing free preventive services. The private hospitals are subsidized by the Government, but are having trouble making ends meet. In Egypt, the successful national control of diarrheal diseases program uses private production, distribution, sales, and advertising services. These services have been effective, but without external A.I.D. support, the Egyptian program may have difficulty supporting the private services with only Egyptian resources. In Indonesia, PVOs are supporting the Government's posyandu network, adding potable water, dengue fever prevention, and other health services to what the Government is able to offer. Also, private physicians are being encouraged to offer more child survival services on their own.

In Haiti, the A.I.D. Child Survival Program is now being implemented principally by PVOs. In Bolivia, A.I.D. is supporting a large group of health PVOs through an umbrella organization and has developed an innovative nonprofit private health provider, PROSALUD, to offer sustainable health care services to low-income families. In both Haiti and Bolivia, the A.I.D. program has successfully been joining private- and public-sector health services in collaborative ventures, replacing the historical

pattern of competition, duplication, and antagonism between the two sectors.

With regard to sustainability of private sector activities, the Bolivia program offers two convincing models of sustainable, indigenous private-sector health services, using cost recovery and a permanent endowment. The Haiti program demonstrates the opposite approach the use of existing PVOs (mostly nonindigenous) to provide emergency humanitarian and "safety net" services on a temporary basis, without much concern for permanent sustainabilty.

The evaluation found that private sector organizations often have some important advantages compared with public sector organizations, including management continuity, administrative agility, a humanitarian rather than political mission, and proficient and permanent staff. Also, private health providers usually provide better quality health services to their clients than do ministries and relate better to local communities than do big government bureaucracies. However, many private providers also have limitations including the small scale of their field operations, poor coordination with government services and among themselves, and long-term dependence on outside financing that reduce their effectiveness in some countries and make them inappropriate as lead agencies in national child survival programs.

Based on the findings of the assessment, there appear to be three important roles for PVOs in A.I.D.'s Child Survival Program. First, PVOs are effective in operations research, developing and testing alternative delivery approaches for lowering costs and improving services. Second, PVOs can mobilize additional resources for health care and can sometimes work to complete and support government child survival services. Third, PVOs can be primary providers of services in cases such as Haiti, where the Government system is unable to deliver services. Besides PVOs, private, fee-for-service health foundations and commercial for-profit health providers can provide child services economically to some population segments in some countries. In most country programs, the governments' ministries of health are appropriately the main providers and the principal recipients of A.I.D. assistance. In the long run, this strategy works best because the governments generally have considerable health infrastructure and permanent budgets. However, PVOs and other private health organizations can play an important complementary role, and A.I.D. should encourage their participation .

Recommendation

A.I.D.'s present emphasis on private sector participation in the Child Survival Program is correctly conceived and sized and should continue without major modifications.

Policy Dialogue

Findings

Although health policy reform is not a primary objective of A.I.D.'s Child Survival Program, the evaluation found that A.I.D., often in conjunction with other donors, has been successful in many countries in persuading host governments to change some important health sector priorities. Some of the areas in which A.I.D. has successfully influenced policies are acceptance and support of child spacing and family planning, greater attention to sustainability, decentralization of planning and administrative functions, use of health data for planning and policymaking, and support of joint private-public sector provision of services.

In Morocco, for example, the Ministry of Health borrowed A.I.D.'s child survival economic analysis (showing that investment in family planning would be paid back to the economy in only 2 years) and used it to persuade the Ministry of Finance to increase government spending for family planning. In Bolivia, A.I.D. used research findings and an antiabortion theme to persuade the Government to support family planning activities for the first time. A.I.D.'s Child Survival Program in Bolivia has had some other policy successes, including persuading the Government to involve the private and PVO providers more in public health, promoting the idea of cost recovery through fees, and leading the Government to accept the notion of integrating vertical health services.

The evaluation did not find evidence that A.I.D. and other donors have succeeded in persuading cooperating developing country governments to reallocate much of their money from curative services to preventive services, although this is a common policy dialogue theme. Many developing countries report that they have increased the proportion of their health budgets allocated for preventive and primary health care, including child survival services. However, most have done so using donor resources and have continued to use large amounts of their own resources to support inefficient hospital and curative services. Statements by key informants and various policy documents show that policymakers are aware of the relative advantages of investing in primary health care and are committed to improving preventive services. However, tradition and powerful political constituencies do not permit major reductions in hospital services, which are badly underfunded and unable to meet the demand for their services.

With regard to the overall policy environment, experience seems to show that child survival programming can be effective and can have impact even in a fairly neutral policy environment, although performance is enhanced by a positive policy environment. In Egypt, strong official policy commitment to public health in general and to the national program of control of diarrheal diseases in particular was a factor in the success of A.I.D.-supported child survival services. Similarly, in Indonesia, strong official support has contributed to the success of A.I.D.'s family planning and child survival services. In Haiti, on the other hand, when official programs lost their

backing and the U.S. Government became politically estranged from the Government of Haiti, A.I.D. was still able to have positive health impact by shifting its Child Survival Program to the private sector.

While it might be difficult for A.I.D. to succeed in an openly hostile policy environment, it is hard to imagine a country in which official policy would be opposed to child survival services. Getting involved in a country's program makes it possible for A.I.D. to begin to influence host country health policies, and evidence shows that A.I.D. can sometimes influence policies in important areas, such as family planning. A.I.D. therefore should not require that favorable health policies be entirely in place as a precondition for supporting child survival in a particular country.

Recommendations

Define country-specific policy dialogue agendas as part of country child survival strategies. Agendas should combine attainable operational policy changes with difficult to achieve policy objectives, such as budgetary reallocations.
Be especially forceful in encouraging integration of family planning and reproductive health into national child survival program priorities. Other donors are often not assertive in this policy area and A.I.D. often has greater knowledge and leverage by virtue of having major child survival and population sector activities. Furthermore, this is a policy theme in which A.I.D. has demonstrably had major impact in a number of countries.

Exogenous Factors

Findings

The CDIE assessment found that adverse political and economic conditions can constrain Child Survival Program performance, particularly in the areas of institutional and financial sustainability. However, A.I.D.'s child survival interventions can be effective and can have positive health impact even under difficult conditions, and unfavorable circumstances should not necessarily preclude A.I.D. assistance.

CDIE's sample of six countries was too small to accurately measure the strength of the relationships between contextual factors and program performance. In CDIE's sample, there was little clear correlation between political factors and child survival program performance. In Haiti, despite political chaos and turmoil, the A.I.D. Child Survival Program has produced some satisfactory health results. Malawi has stability under a dictatorship and is making uneven progress. Bolivia has made steady progress in the health sector despite a long history of political instability. It appears that child survival can be successful in varying political environments, at least in terms of meeting immediate service delivery objectives.

The state of a country's economy is another exogenous factor that

influences child survival program performance, although the degree to which it constrains performance is not completely clear. Indonesia, with the fastest growing economy in the CDIE sample, has one of the best performing child survival programs. But Egypt and Morocco also made strong progress in reducing child mortality during the 1980s in spite of stagnant economies during that period. Extreme poverty, as the cases of Malawi, Haiti, and Bolivia show, does not preclude program effectiveness or even health impact.

Although adverse political and economic conditions may not necessarily constrain short-term program performance, they undoubtedly make institutional and financial sustainability more difficult. Haiti and Malawi, the two poorest countries in the sample, were also the two cases where prospects for financial sustainability seemed worst. However Bolivia also characterized by serious poverty and a tradition of political instability is the program in CDIE's sample that has made the most progress in institutional and financial sustainability. To some extent, A.I.D. faces a dilemma in identifying future emphasis countries. On one hand, emphasis countries should be where the health needs are greatest, often countries with weak economies and shaky political institutions. On the other hand, A.I.D. wants its investment to be productive and the services it supports to have a good chance of being institutionalized and sustained, requiring a degree of political and economic stability. This assessment did not find a definitive answer to the question of how great a role exogenous factors play in enhancing or constraining program performance. However, the assessment showed that programs can get positive short-term health results in the presence of unfavorable conditions. Furthermore, positive results in producing institutional and financial sustainability, while more difficult, are not impossible even under adverse conditions.

Recommendation

Do not necessarily exclude countries with serious economic or political problems from A.I.D. child survival assistance.

Donor Coordination

Findings

The CDIE assessment found that donor cooperation functions surprisingly well in the child survival area. Child survival is, in the words of a World Bank official interviewed by CDIE in Bolivia, a "darling of donors." Primary health care is a favorite area for bilateral donors, multilateral donors, and PVOs. Saving babies has proven to be noncontroversial, cheap, easy, politically popular, and strikingly successful compared with almost any other kind of development assistance.

United Nations organizations play a lead role among donors in many countries, especially in immunizations. Since A.I.D. arrived on the child survival scene behind some of the other donors, it has often been willing to "fill in" in national programs,

providing elements that are not being fully supplied from other sources.

So many donors provide child survival assistance that coordination among them is more of a challenge in this sector than in other sectors. The national Child Survival Program in Bolivia, for example, receives major ongoing funding support from two multilateral development banks, four United Nations agencies, and seven bilateral foreign aid programs. The Ministry of Health reports that it has been able to more or less coordinate and rationalize activities from all these different sources, admittedly with difficulty and problems. However, the donors report that the Ministry does not coordinate and manage activities with so many organizations as effectively as it thinks it does. The donors therefore try to coordinate activities informally among themselves. Everyone involved concedes that so many donors in the same sector creates an impossible paperwork and management burden on the Government.

In all six country case studies, there was little evidence of duplication of donor activities or critical gaps. Tasks were usually divided so that each donor provided what it could provide best. Donors, usually in consultation with the host government, divide the pie so that each donor's resources complement the rest, resulting in reasonably complete and comprehensive national programs. Donor cooperation takes place at the country level and is different in every country. In some countries it is an initiative of the donors, who consult informally among themselves. In others, the host country governments try to coordinate donor resources. In some countries, like Bolivia, different donors are assigned primary responsibility for different geographic areas. In others, responsibilities are divided functionally, with different donors agreeing to provide vaccines, syringes, cold chain equipment, vehicles, ORS, mass media promotion, technical advisers, operating subsidies, and so on.

One problem CDIE observed was that the many donors and donor projects working in child survival sometimes create a major administrative burden for the local health authorities because of the different and often complex requirements donors have for project design, procurement, vouchering, disbursement, and reporting. Another problem was that the easy availability of abundant donor resources was creating deepening donor dependency that could prove harmful if donors turned their attention to different activities.

Another concern of some A.I.D. field staff concerns the political and public opinion dividend that donors receive as a result of supporting child survival activities. It is widely felt that A.I.D. is less effective than other donors in obtaining political and public-opinion recognition for supporting child survival. Other donors often make smaller contributions than A.I.D. but, because of having more assertive public relations activities, receive more of the political and public-opinion payoff. A.I.D. needs to do more to get the word out both in the assisted

countries and in the United States about its child survival successes.

From discussions with officials of other donors, the evaluation teams made some general observations concerning the relative strengths and weaknesses of the kind of assistance A.I.D. provides compared with the assistance that other major child survival donors provide. Understanding A.I.D.'s comparative strengths and weaknesses is very important in deciding what types of assistance A.I.D. can best provide to the program in the future.

Areas in which A.I.D. has the comparative advantage are the following:

1. Institution building. A.I.D. has many years of experience providing technical assistance and training to strengthen organizations in both the public and private sectors.

2. Family planning. A.I.D. is the world leader among donors in developing family planning services. Many other donors avoid supporting family planning, preferring to leave it to A.I.D.

3. Policy dialogue. Since A.I.D. provides relatively large sums of grant support in the emphasis countries compared with PVOs and other bilateral agencies, it has comparatively more clout at the policy level in many countries. Furthermore, its sponsorship of the Demographic and Health Surveys (DHS) and other surveys puts it in a position to participate directly in the analysis and deliberations about health needs and services. Also, the Agency's close association with the U.S. Government and its relationships with U.S. ambassadors (who usually are strong supporters of child survival) sometimes gives A.I.D.'s views extra weight. Finally, its full-time technical staff in the field gives it an advantage over most other agencies in being well informed and well connected.

4. Private sector emphasis. Unlike some other international donors, A.I.D. likes to deal with the private sector, both commercial and nonprofit.

5. Adaptability. Unlike many other donors, A.I.D. develops its strategies and manages its projects largely in the field. A.I.D. gives its field staff latitude to design interventions that meet local needs and to change them as circumstances dictate.

Areas in which A.I.D. is weak, compared with other child survival donors, are the following:

1. Operating expenses. A.I.D. is a poor source of support for routine operating expenses, such as salaries and pharmaceuticals. A.I.D. is anxious to avoid nurturing permanent dependency on U.S. foreign assistance and creating ill will should it have to reduce its assistance. Other donors are less concerned with these issues and are willing to subsidize operating expenses.

2. Infrastructure. A.I.D. does not have the large amounts of money required to provide infrastructure, such as health facilities and water systems, on a national scale. These items are better financed by the multilateral donors.

3. Quick response. A.I.D. is slow and bureaucratic, with burdensome accountability, reporting, and procurement requirements that can bog down any implementing agency.

4. Small activities. Because of its long project development cycle and the need to consolidate project portfolios, A.I.D. cannot easily undertake small, individual activities with specific communities or health facilities.

These comparative advantages and disadvantages complement the strengths and weaknesses of other donor organizations. Program designs should capitalize on A.I.D.'s comparative strengths and avoid the areas of comparative weakness, both to improve the performance of A.I.D. assistance and to coordinate resources efficiently with other donors.

Recommendation

Develop country-program strategies that take advantage of A.I.D.'s comparative strengths and avoid getting into activities where A.I.D. has comparative weaknesses.

Vertical Versus Integrated Health Services

Findings

Vertical services, such as special national vaccination campaigns, are provided separately from other services. Vertical services usually have high priority and high visibility and can be delivered quickly and massively with minimal bureaucratic problems. However they are often expensive, wasteful of resources, and not easily sustainable. In contrast, integrated services are packages of different health services that are provided together through the same service delivery outlets. They are continuously available, permanently institutionalized, and more likely to be sustained. They avoid duplication of facilities and staff. In integrated systems, clients receive more interventions and missed opportunities are avoided. For example, a mother who brings her child in for vaccination can also be given oral rehydration materials and educated about family planning in one visit. However, in integrated arrangements, each service competes with all other services for time, money, space, and staff time. Also, integrated services are more likely to get stalled in the routine administrative bottlenecks of the bureaucracy, to suffer from underfunding, and to have slow or inadequate impact.

The CDIE assessment found a mixed picture concerning vertical versus integrated services. In Haiti and Egypt, CDIE evaluation teams concluded that vertically structured child survival services were advantageous. Egypt's national control of diarrheal

diseases owes its success, in part, to the fact that they were independently managed, high profile programs with their own budgets. In Haiti, services that were making initial progress family planning, ORT, and immunizations were set back when they were integrated prematurely. In Indonesia and Morocco, vertical services were initially established by A.I.D. to deliver only family planning services. When these units began to function effectively, there was pressure from the host governments to incorporate more primary health care services. Fearing that family planning might get lost, A.I.D. initially resisted the move to integrate services. Additional services were eventually integrated into these A.I.D.-supported units in both countries, apparently with success. Family planning seems to have benefited from the association with child survival. Mothers who are attracted by curative care can be educated about other services, including family planning.

The CDIE assessment did not find a single best answer to the dilemma of vertical versus integrated services. However, careful review of the six case studies seems to reveal a lesson about the phasing of activities. CDIE observed that new child survival services can often be most quickly and effectively introduced initially as vertical services. At first, a new service can benefit from being promoted as something new and different. The clear focus of a program dealing with a single health problem leads to high staff motivation and quick implementation. Also, experience is gained quickly, making it possible to make changes before the service becomes cast in concrete. Finally, strong initial results can help overcome doubts and win the support of the medical establishment and political leadership. Subsequently, once the new service becomes widely accepted, it can be integrated permanently into the existing public health system. However, this process apparently takes time, and the urge to integrate services prematurely to save money and effort may be very harmful in the long run. While this pattern is not universal, some of the mature A.I.D. country child survival programs that began around 1986 and 1987 Egypt, Morocco, and Indonesia, for example are now in the midst of a transitional process of integrating activities, which began as vertical services, into permanent public health system service packages.

Recommendation

Support the introduction of new health interventions initially as separate, vertical services unless there are strategic reasons in a particular setting to do otherwise. Then, when the new services are fully functioning, proven effective, and widely accepted, encourage their integration into ongoing services. This process should not be rushed, or new services will not be able to compete with older services when they are combined.

6. Program Recommendations and Issues

The bottom line of the CDIE assessment of A.I.D.'s Child Survival Program is that the program is successful and should be continued. The program appears to be making a significant

contribution to expanding the coverage of child survival services and reducing infant mortality on a national scale in many countries. Its interventions are cost-effective. Its "people level impact" saving children's lives is compelling, visible, quick, and measurable. There is a substantial political and public-opinion benefit to A.I.D. country programs.

Specific recommendations for improving A.I.D. assistance are made throughout the assessment report. This section concludes the assessment with a few additional general recommendations concerning A.I.D.'s overall approach to child survival.

A.I.D.'s Overall Approach

Update A.I.D.'s child survival strategy. Based on 8 years of accumulated experience, A.I.D. needs to revise its strategy and its objectives in the child survival area. A.I.D. should consult with stakeholders, especially policymakers in the new U.S. administration, to discuss A.I.D.'s role in the overall worldwide, multidonor effort. The program has evolved in new directions and has become increasingly diverse in its activities. Experience to date can help determine which of the many possible activities should get priority in the future.

The remaining recommendations suggest points for an updated Agency child survival strategy.

Select specific health interventions at the country level according to their potential for producing further reductions in infant mortality at low cost, beyond the gains already achieved. The notion of core interventions (such as the "twin engines" of immunizations and ORT) is no longer needed. Instead, A.I.D. field Missions should develop country-specific child survival strategies. Health interventions selected for support should be justified in terms of offering the most cost-effective way to further reduce infant and child mortality. Interventions selected for support should be limited in number, suitable for national-scale implementation, and (in the long run) sustainable without permanent A.I.D. support.

Provide assistance simultaneously for health services for mothers and children, for institutional strengthening, and for financial sustainability in all country programs. Most A.I.D. country programs should support activities in all three child survival assistance categories but in different proportions. The proportion of emphasis should depend on maternal and child health, socioeconomic and political conditions; other donor activities; and the level of development of health services and institutions. As country programs evolve, their main emphasis will usually begin with health services for mothers and children, then move to institutional strengthening, and finally shift to financial sustainability.

Emphasize A.I.D. support for institutional strengthening and financial sustainability. Since many other donors favor providing subsidy support for everyday health services, A.I.D.

can make its best overall contribution to the worldwide child survival effort by concentrating somewhat more on institutional strengthening and financial sustainabilty. A.I.D. has some comparative advantages among donors that suit it especially well for providing this kind of assistance. However, the program should also continue to support health services for mothers and children, which produce invaluable health, public opinion, and political benefits.

Make A.I.D.'s accomplishments in child survival known to the public and the political leadership in cooperating countries and in the United States.

Balance quick results with long-range developmental objectives. Child survival health interventions can have immediate impact on some health indicators, such as coverage rates and incidence of childhood diseases. These indicators can give the illusion of fast progress, but the gains can disappear as quickly as they appear if donor support ends too soon. Three of CDIE's successful case studies Indonesia, Egypt, and Morocco show the results of A.I.D. support for primary health care services that actually began some years before A.I.D.'s child survival initiative in the mid-1980s.

Unresolved Issues

Program objectives, indicators, and phase-out criteria. A.I.D. needs to identify objectives, benchmarks, and indicators in such areas as providers' institutional development, financial sustainability, and health policy. Decision criteria are needed to help decide whether country programs are performing satisfactorily and when A.I.D. support should phase out.

Research. Some critical causes of infant and child mortality in developing countries require advances in health technologies. Two examples are malaria drugs and new vaccines. A.I.D.'s role in supporting this kind of applied research needs to be examined and defined.

Cross-sectoral linkages. A.I.D. should seek ways in which to combine or coordinate programming in the different social sectors to strengthen and take advantage of the effects of interaction among health, education, and population interventions.

Appendix: Summary of Recommendations

The Synthesis Report makes a series of recommendations for future A.I.D. programming in the child survival area. This appendix compiles the recommendations, grouping them into three categories: recommendations concerning the program's health services for mothers and children, recommendations concerning A.I.D.'s management of the program, and overall program recommendations.

Health Services for Mothers and Children

What should A.I.D. do with regard to its specific interventions?

Immunizations

Provide A.I.D. support for immunizations even in countries where other organizations have historically taken the lead.

Oral Rehydration Therapy

Raise the profile and priority of ORT in Agency child survival policy and strategy, emphasizing the need for comprehensive implementation strategies.

Develop an ORT approach that takes account of the complexities of ORT and specifies adequate levels of support services.

Emphasize information, education, and communication (IEC) activities especially designed to promote and support ORT.

Reproductive Risk

Feature family planning as a key component of most country child survival programs.

Strengthen programmatic coordination between A.I.D. population and child survival activities to enhance the synergy.

Acute Respiratory Infections

Support research and development activities leading to more cost-effective interventions for acute respiratory infections.

When practical and cost-effective interventions become available, increase operational support for reducing acute respiratory infection.

Nutrition

Increase program emphasis on vitamin A supplementation and exclusive breast-feeding. Support other nutritional interventions in specific country programs if evaluations show that they are effective according to Child Survival Program criteria.

Analyze the child survival impact of PL 480 feeding programs and try to link them more effectively to child survival objectives.

Local Health Problems and Epidemics

Support cost-effective field initiatives responding to local health conditions that seriously threaten child survival, directly or indirectly.

As part of an updated program strategy, provide guidance to the field giving criteria for deciding when a particular health condition is appropriate for Child Survival Program support.

Safe Motherhood

Give increased priority to prenatal care, healthy birthing practices, and neonatal care in country child survival programs.

Water and Sanitation

Do not provide major support for water and sanitation infrastructure from the Child Survival Account.

Coordinate with the multilateral donors in establishing water and sanitation systems, with A.I.D. providing support services such as education, promotion, and community mobilization.

Program Management

How can A.I.D. improve the management of its Child Survival Program?

A.I.D. Staff

Implement a new overall staffing plan based on a comprehensive review of Agency child survival objectives and strategy.

Strategy

Review and update A.I.D.'s overall Child Survival Program strategy.

Develop standards and procedures for individual country strategies.

Administrative Requirements

As part of documenting 1994 program results for the Annual Report to Congress, add an analysis of administrative bottlenecks along with an assessment of their impacts on the Child Survival Program; then identify specific actions for streamlining administrative procedures.

Emphasis Countries

Retain the emphasis country concept in terms of concentrating resources on a limited number of objectives in a limited number of countries.

Define the strategic implications of "emphasis" in a new Agency child survival strategy by specifying the criteria for emphasis, guidelines for program objectives in emphasis countries, and phase-out criteria.

Private Sector

A.I.D.'s present emphasis on private sector participation in the Child Survival Program is correctly conceived and sized and should continue without major modifications.

Policy Dialogue

Define country-specific policy dialogue agendas as part of country child survival strategies. Agendas should combine attainable operational policy changes with difficult to achieve policy objectives, such as budgetary reallocations.

Be especially forceful in encouraging integration of family planning and reproductive health into national child survival program priorities. Other donors are often not assertive in this policy area and A.I.D. often has greater knowledge and leverage by virtue of having major child survival and population sector activities. Furthermore, this is a policy theme in which A.I.D. has demonstrably had major impact in a number of countries.

Exogenous Factors

Do not necessarily exclude countries with serious economic or political problems from A.I.D. child survival assistance.

Donor Coordination

Develop country program strategies that take advantage of A.I.D.'s comparative strengths and avoid getting into activities where A.I.D. has comparative weaknesses.

Vertical Versus Integrated Health Services

Support the introduction of new health interventions initially as separate, vertical services unless there are strategic reasons in a particular setting to do otherwise. Then, when the new services are fully functioning, proven effective, and widely accepted, encourage their integration into ongoing services. This process should not be rushed, or new services will not be able to compete with older services when they are combined.

Overall Program Recommendations

While the recommendations listed above focus on the more specific aspects of A.I.D.'s Child Survival Program, those listed below conclude the assessment with a few additional recommendations regarding A.I.D.'s overall approach to child survival.

Update A.I.D.'s child survival strategy.

Select specific health interventions at the country level according to their potential for producing further reductions in infant mortality at low cost, beyond the gains already achieved.

Provide assistance in country programs in all three activity areas health services for mothers and children, institutional strengthening, and financial sustainability. Assistance should not normally begin in a country until A.I.D. has a long-term country strategy with specific objectives in all three areas.

Determine the primary emphasis area for A.I.D. support to country programs based on health conditions, existing health services, political and socioeconomic conditions, and other donor support (see figure).

Generally, in countries where infant mortality rates are very high, coverage of health services deficient, and other donor resources inadequate, A.I.D.'s program of assistance should initially emphasize health services for mothers and children. The selection of specific health interventions for A.I.D. support should depend on the causes of mortality and morbidity in the country, the appropriateness of available low-cost technologies to local conditions, and the state of existing host country and donor interventions.

Subsequently, as the coverage of health services improves to acceptable levels, the emphasis of A.I.D. assistance can shift to institutional strengthening. Depending on local circumstances, institutional strengthening activities may deal with such factors as staff training, community infrastructure, management information and planning capability, outreach and promotion mechanisms, and logistical systems.

Finally, as health services for mothers and children and the local institutional base are consolidated, A.I.D. can shift its emphasis to promoting permanent financial sustainability.

Depending on local circumstances, A.I.D.-supported activities in this area can include promotion of policy dialogue to reform the national health budget, establishment of fee-for-service arrangements, development of self-financing private health institutions, cutting of the costs of existing services, and creation of endowments.

Give greater emphasis programwide to institutional strengthening and financial sustainability.

There are two reasons for recommending higher programwide priority for institutional strengthening and financial sustainability. First, heavy concentration on expanding health services for mothers and children, without commensurate attention to the other two areas, may distort countries' allocation of their own health resources, create heavy dependency on external donors, and make it difficult for A.I.D. to extricate itself after a reasonable period of time. Second, many other donors prefer to subsidize health services for mothers and children, while few are interested in or have the capability for the more complex and less gratifying work of institution building and promoting financial sustainability. A.I.D.'s permanent in-country technical staff, its sophisticated grant-financed technical assistance, its institutional capability to provide large-scale in-country and participant training, and the political stature it enjoys in many countries give it unique comparative advantages over other donors to provide this kind of assistance.

Develop a uniform methodology for computing and reporting costs,

cost-effectiveness, and economic benefits of child survival interventions.

Balance quick results with long-range developmental objectives.

Make A.I.D.'s accomplishments in child survival known to the public and the political leadership in cooperating countries and in the United States.

FOOTNOTES:

1. Report to accompany H.R. 4637, Senate Foreign Assistance and Related Programs Appropriation Bill, 1989, p. 91.
2. A.I.D. has many strategy and policy documents elaborating on its child survival approach. See, for example, an executive memorandum entitled, "The A.I.D. Child Survival Strategy," from A.I.D. Administrator M. Peter McPherson, dated April 1, 1986.
3. t test, p=.01

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